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THE UNIVERSITY OF ALBERTA

VOCATIONAL OPPORTUNITIES FOR BOYS
IN ALBERTA

A DISSERTATION

SUBMITTED TO THE COMMITTEE ON GRADUATE STUDIES
IN CANDIDACY FOR THE DEGREE OF
MASTER OF ARTS

DEPARTMENT OF PHILOSOPHY

BY

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INTRODUCTION

The entrance into Alberta High Schools, during the past decade, of thousands of pupils who formerly ended their schooling at or below Grade VIII, has engendered here as elsewhere a great agitation for the extension of school curricula to meet the vocational needs not merely of entrants to the learned professions, but of artisans and employees in business or industry. Vocational training, exploration of aptitudes, vocational counsel and placement are all under discussion as desirable activities which should be introduced in order to launch into useful living the many who are now frustrated in the attempt to scramble through academic courses to Normal School or University.

The adoption of a province-wide plan of vocational, pre-vocational or technical education at local centres seems far away, partly because of the great expenditures popularly associated with such a plan, and partly because few people are deeply concerned about the thousands of children whose schooling is simply sawn off at the point marked "Failed". In the meantime, therefore, we can only survey the vocational programme to discover some part of it which stands above controversy and is economically feasible; and we find that it is possible (and may well be useful) to prepare for the personal use of boys and girls a manual containing important particulars of vocations which are open to them in their own province. If the nature and prospects of the principal callings can be set forth briefly and clearly, it may reasonably be hoped that High School students will survey a much wider field and survey it more intently than they do now, in making their choice of a career.

The writer has tried to prepare a manual of that kind, dealing with the occupational groups about which a significant general statement can really be made, provided that such a statement is not what everyone already knows. The question of including such trades as mining or carpentry arose. When it appeared that the state of unemployment in these trades was a matter of conjecture, that the number in work was equally vague and subject to wide fluctuation, that Union regulations apply only to those in a few large centres, and that the work itself hardly calls for description, the writer felt that little remained which could justify treatment of such trades in this thesis.

Information contained in the following pages has been gathered by various means including the following:

(a) Interviews with the employment managers of banks, factories, dairies, etc., followed up by questionnaires to five or six leading firms in each business, and personal correspondence.

(b) Interviews with members of the different Faculties of the University of Alberta, and with practising professional men.

(c) Personal visit and inspection of flour mill, dairy, packing plant, wholesale house, and provincial and city technical schools.

(d) Reference to the University Calendar, the Alberta Directory and various numbers of the Canada Year Book.

(e) A questionnaire to fifty towns and villages relating to demand and supply in skilled trades.

The immediate line of advance from this first effort will be towards greater completeness and accuracy. Pharmacy and church ministry are two serious omissions from the present work: Commercial Art - a distinctive and promising field - should also be brought in. But beyond, there should be a more thorough treatment of each major field in a separate volume - a "Vocational Series" similar to that published by Scribners (New York) but in a Western Canadian setting.

It occurs to the writer that the ideal machinery for compiling a more exhaustive and possibly more authoritative volume on this subject exists in the Alumni Society of any of the older city High Schools. With its older alumni prominent in many walks of life, with its claim upon their loyal co-operation, with its large staff of competent teachers to organise information, and above all with its hundreds of young people needing vocational counsel, the city high school has the sources, the skilled labor and the incentive for a very thorough-going piece of vocational research.

CHAPTER I

THE PROFESSIONS

1. The Profession of Dentistry.

Little need be said in explanation of the general nature of a dentist's work. Most of us have been under his ministrations, and very large numbers of us carry around in our mouths the evidences of his skill. It is well for us to remind ourselves, however, that every act in the painful drama of the dental chair has behind it a fund of knowledge and skill which is not acquired haphazard. Back of the "freezing" injection there is an accurate knowledge of drugs and of nerve location. Back of the drilling operation there is a thorough knowledge of tooth structure and much practice in the handling of the machine. And before you can leave the dentist's office with a new "plate" in your mouth, the dentist has had to do some remarkably skilful things over a gas-ring or spirit lamp with different sorts of wax, gold and other materials.

Modern medicine is discovering the importance of safeguarding the human body from the slow poisoning of diseases or decaying tissue. It is also realising more completely as time goes on the complex relationships between various organs of the body, and the marked effect which an abnormal condition of one organ may have upon other organs. It is known, for example, that a septic condition of the teeth may derange the stomach and endanger the ears. Hence, it is now considered necessary for the efficiency of dental surgery that the dentist should have a considerable knowledge of general medical theory and practice.

In order to practise dentistry in Canada, it is necessary to graduate from the Department of Dentistry of a recognised University. An excellent training leading to the degree of D. D. S. is now provided at the University of Alberta. We shall, therefore, confine our information in this section to the profession as learned and carried on in this province.

Training.- For entrance to the University as a student of dentistry the following High School courses are required:

Three years in Composition, History, and English Literature.

Two years in Latin, Algebra and Geometry.

Two years in French or German.

One year in General Science, Arithmetic, Chemistry and Physics.

With these credits you may go up to the University, where you will be required to attend one year in Arts and five years in Dentistry. Instead of the first year in Arts you may take the following Grade XII subjects in High School:

Composition 4, Literature 4, Algebra 3, Geometry 3, Trigonometry 1,

A third year in one language.

Three out of the following: History 4, Chemistry 2, Physics 2,

Biology 1, French 3, Latin 3, German 3, Greek 3.

Students often express some surprise and disgust at having to spend a year in Arts before going on to the real dental training. There are various good reasons for that, however, and here is one. The dental profession can only absorb a few recruits each year, and it is desirable that these should be the best possible. Dentistry requires a high order of intelligence;

and by passing all the would-be dentists through the first year in Arts it is possible to select from those who succeed there the men who show real ability. The dental course and the instruction therein are expensive; and it does not pay to have them retarded or hindered with men who have small prospects of making good.

Alternatives.- Two good alternatives are offered to the single dentistry course.

1. The combined course leading to the degree of B. A. and D. D. S.
2. The combined course leading to the degrees of B. Sc. and D. D. S.

These combined courses comprise the following:

Three years of Arts or Sciences (or Grade XII followed by second and third years.

Four years of dentistry, identical with the second to fifth years of the ordinary dentistry course.

The first three years are broadly distributed over the literary, historical, scientific and philosophical fields of scholarship, and the first year of the dentistry course proper is absorbed in these.

The single combined plans may be comprised thus:

YEAR	1	2	3	4	5	6	7
<u>Course</u>							
D. D. S. Arts#		Den. 1	Den. 2	Den. 3	Den. 4	Den. 5 (D. D. S.)	
B. A. and Arts#		Arts	Arts	Den. 2 (B. A.)	Den.	Den.	Den. 5 (D. D. S.)
D. D. S.							
B. SC. and Sci.#		Sci.	Sci.	Den. 2 (B. Sc.)	Den. 3	Den. 4 (D. D. S)	Den. 5
D. D. S.							

#

Or Grade XII equivalent.

As indicated under Year 4, the appropriate degree is awarded at the end of the fourth year in the combined courses.

Thus a good foundation of general scholarship, which will be valuable all through life, is offered with only one year's delay in graduating as a dentist. Another attractive feature of the combined courses is that they make it possible, even at the end of the third year, to revise your vocational plan and transfer to Education or Medicine without loss of time or credits; or at the end of the second year into Law, if the Arts course has been followed.

The training of a dentist includes a somewhat surprising diversity of subjects. Beginning in the first dentistry year with Botany, Zoology, Chemistry, Physics, Mathematics and a modern language, it expands into a general medical course in the second and third years, to include Anatomy, Bacteriology and kindred subjects. In the fourth and fifth years the specific requirements of dentistry receive increasing attention, and instruction is given in metallurgy, anaesthetics, use of the X - ray, the making of crowns, bridges and plates, and all the other activities which we may observe and suffer in any dentist's office.

About seven dental students graduate annually from the University. Apart from a state of keen competition in the cities, the profession is not overcrowded. Fortunately for the profession, though unfortunately for the rest of mankind, it is safe to prophecy that the passing of "out-West" pioneering conditions and the increase of the more luxurious ways of living will lead to a general decline in dental health. That has proved to be the case in the Middle and Western States. The general outlook for the profession may, therefore, be considered as promising.

2. The Medical Profession.

There is no vocation which commands greater social prestige in any society than that of the medical man, and none which in the general life of the community brings greater financial returns. There are very good reasons for the social prestige. In the first place, the doctor must have superior intelligence or he would never qualify for his profession. In the second place, the service he has to sell is indispensable; we can do without many things, but we must have relief from pain, cure from disease and healing of injuries which menace life. And it is not hard to understand why the doctor should earn a very comfortable livelihood. He has to carry very grave responsibilities, as when human life depends upon the wisdom of his choice between various medical or surgical procedures. He is liable to call at any hour of the night, and may have to make laborious journeys in the worst weather and road conditions. His daily routine and his leisure may be deranged by unexpected calls. Frequently his utmost efforts are futile and he has to fight against the discouragement of failure. And much of his work is done with only a slender hope of ever receiving payment for it. He has to be in good physical condition and free from nervous infirmities; if he has worries or dark moods he must keep them out of sight, or he will lose the confidence of his clientele.

It must also be remembered that the medical man has behind him a training, in which he was exposed and inured to sights, sounds and smells from which the rest of us prefer to be exempt. That training also involved an enormous amount of book study, together with the acquisition of manual

dexterity and operative technique equal to that of any other occupation.

Medical Needs of Alberta.- Like the legal and dental services in Alberta, the medical service has in one sense practically reached the saturation point. That is to say, that if we look at the province from the point of view of a doctor seeking a good practice, we have to admit that there are very few districts left which could offer attractive prospects to a medical man. But, on the other hand, there are very many people living in remote and sparsely settled regions who are in need of medical services, and who, as citizens and members of society, have a right to those services. The Ministry of Health has already taken the step of bringing in salaried lady doctors to serve the scattered population of the North, thus applying in a very small way the principle of medical service. For several years, also, it has sent out travelling clinics over the province. There is little doubt that within comparatively few years Alberta will follow the example of other countries and evolve some form of Health Insurance that will ensure medical service to communities which cannot otherwise support a doctor.

Medical Course at the University.- Students entering a medical course in Alberta must matriculate in the following courses:

English Composition 1, 2, and 3.	English Literature 1, 2, and 3.
History 1, 2, and 3.	Latin 1 and 2.
Algebra 1 and 2.	French 1, and 2, <u>or</u> German 1 and 2.
Geometry 1 and 2.	Chemistry 1.
General Science 1.	Physics 1.
Arithmetic 1.	

- and in addition must have completed the first year in Arts or the equivalent courses in Grade XII.¹

The medical course is of six years' duration. The first year is devoted to laying a foundation of general scientific knowledge. In the second and third years the student is thoroughly grounded in anatomy, bacteriology and kindred subjects by textbook and laboratory study. In the fourth year he begins to come into contact with the surgical and medical treatment of actual cases. In the fifth year, known as the Clinical Year, this practical instruction receives greater emphasis, considerable time being spent in hospital wards. In the sixth or Hospital Year, the student is placed as assistant to an Interne at the University Hospital, so that he may begin to assume some minor responsibilities and observe the day-to-day progress of the patients. The successful student graduates as M. D. at the end of the sixth year.

3. The Legal Profession.

There are about 700 men practising law in Alberta. On the average about a dozen law students graduate from the University annually - a sufficient number to replace vacancies through death or retirement, and to meet the needs of new settlement. The following table shows roughly the state of supply as compared with other parts of the Dominion.

¹

See requirement for Dental students.

TABLE I

Average Population Served by One Lawyer in Canada.^a

British Columbia	890	Quebec	1150
Manitoba	900	Saskatchewan	1160
Alberta	980	Prince Edward Island	2400
Nova Scotia	1030	New Brunswick	2730
Ontario	1150	Canada	1120

^a

Based upon Carnegie Foundation Bulletin: Present Day Law Schools in the United States and Canada.

The above table indicates clearly that Alberta has ample legal service, and that anyone who joins the profession in this province must expect to make a living either in the teeth of strong competition or in new centres as they spring up. There is already a certain degree of crowding in Calgary and Edmonton, not entirely due to depressed conditions. The older towns and villages have their law offices; and any heavy incursion of new men into the profession would have to be distributed among small villages and sparse settlements where only the barest living could be made.

In this province (as also in Saskatchewan and Manitoba) the functions of "barrister" and "solicitor" are merged. Anyone admitted to the Bar in Alberta is barrister and solicitor, and may undertake cases in court, give professional advice, prepare documents and deeds relating to property, or perform any of the duties belonging to either branch of legal service.

Practically all recruits to law now pass through the University Law School, but we may mention that it is still possible to qualify for the Bar by two years' successful study in Arts, five years' service in the office of

a law firm, and passing the examinations of the provincial Law Society.

Students entering upon the work for the degree of Bachelor of Laws are required to have completed two years in Arts, which must include courses in English Constitutional and Canadian History and also a thorough grounding in Latin. (Any High School boy contemplating a legal career should take the fullest advantage of school courses in these subjects.) The Law Course comprises three years of study.

The combined course leading to the degrees of B. A. and LL. B. requires only one year longer, and offers the opportunity of acquiring a much better grounding for future culture, without any deterioration in the legal training obtained. The two courses are compared below:

Year	1st	2nd	3rd	4th	5th	6th
Course:						
Ll. B.	Arts#	Arts	Law	Law	Law	
B. A. and Ll. B.	Arts#	Arts	Arts	Arts/Law (B. A.)	Law	Law

Or Grade XII equivalents.

In addition to completing the University course, the student must "serve articles" with a reputable law firm for twelve months before he can be admitted to the Bar; that is to say, before he can enter upon public practice as a lawyer. Serving articles practically means doing office work; he may be required to fetch and carry documents to and from the Law Courts, Land Titles Office, etc., or to search through law records for cases involving disputed points; anything in fact to make himself useful and familiar with legal practice. During this period he is permitted on occasion to plead

cases in the Petty Debt or Police Courts. He is paid during his articulated service a small monthly salary, \$25.00 or more.

A student taking the single course for the LL. B. degree is required to serve his articles continuously for twelve months after he graduates. One who takes the combined course for the LL. B. and B. A. degrees is permitted to serve articles during his course for periods of not less than four months in duration. Hence, he is able to qualify for admission to the Bar as soon as the one who takes the single course.

The fee for admission to the Bar is \$150.00. Subsequent annual fees range from \$25.00 in the cities to \$10.00 in small centres.

4. The Career of School Teaching.

There are in Alberta nearly 5,000 elementary and secondary school classrooms under direct control of the Department of Education. The number of classrooms, of course, determines the number of available teaching posts. That number slowly increases from year to year; the number of rooms in operation during the past five years being:

1925	4759
1926	4803
1927	4977
1928	5148
1929	5345
1930	

Each year about 900 new teachers emerge from the Normal Schools and enter the schools. (Under the stress of acute unemployment among teachers during the present year, the number of new teachers will by a special effort be held down to 700.) Those whom the new teachers replace will retain their certificates, and may at any time of necessity or convenience go back into

the work. Very frequently they do so.

To the young man who contemplates teaching as a career, the above facts are of significance.

1. The teacher-demand cannot be inflated; it grows slowly with the growth of population. Unlike doctor, dentist, lawyer or business man, the teacher cannot hang up his sign in any Main Street he chooses and take his share of the trade. He must go to a classroom provided by the public; if there is a teacher there already, the classroom will not support another.
2. The teacher-supply is very adequately maintained by the Normal Schools and may at any time of depression be inflated by housewives, salesmen, farmers and others returning to the profession.

The young man who decides to become a teacher should, therefore, make up his mind to do so on the most advantageous terms possible; otherwise he is likely, between the fairly rigid demand and the highly elastic supply, to find himself unemployed at the very time when general depression minimises the chances of earning a living in any other way.

This introduction is not intended as a deterrent, but as a warning of the need for such preparation as will enable the male teacher to compete successfully with the floating surplus. He should be satisfied with nothing less than the highest qualifications he can obtain.

The diagram upon page 14 shows four alternative plans for training as a teacher. A common programme of courses for University Matriculation and Normal Entrance is now provided, so our comparison of these four plans may begin at the Normal Entrance level.

Under the first plan, the student, having passed the required High School courses, enters Normal School and if successful is able after nine months' training to apply for any school position in the province.

Under the second plan, he stays at school and obtains credit in eight courses of Grade XII, after which he enters Normal School as a student in the first class. He receives his certificate one year later than if he had followed the first plan, but he gets a certificate of the highest Non-University grade.

Under the third and fourth plans the student defers the pleasure and dignity of earning his own living for three years more, while he takes a full academic course in Arts or Sciences at the University, and a subsequent year of training in the theory and practice of education. It is hardly necessary to point out that such qualifications as this brings with it, command far more consideration and much more attractive positions than any non-degreed certificate. It will always be true that a particularly inspired teacher with no paper qualifications will surpass the most highly qualified "misfit" but it is equally true that a good teacher becomes a better teacher by enriching his own scholarship.

Any would-be teacher is well-advised to weigh carefully the relative advantages of these plans. If he chooses the first, he may be earning good wages within a year of leaving High School. On the other hand, he may be one of several hundred teachers whose qualifications do not command notice or preference. If he is fortunate and gets a position, he readily adjusts himself to his new economic condition, to good clothing and liberal spending, with the results that the system becomes his master and he remains what he

started as - just one of the crowd. Comparatively few teachers fulfil their ambitious plans of financing themselves through University, once they have acquired adult tastes and spending habits. Those who undertake to graduate extra-murally have a long, hard road to travel in order to compete, at the rate of two courses per summer, the nineteen courses of The Arts or Science degree.

Those who follow the second plan are building a little better. Their First Class certificate, while in normal times it does not bring significant returns, does in time of over-supply give their application letters a useful precedence. And if they embark upon extra-mural work towards a degree, they have three summers' work already done.

The third and fourth plans are by far the most commendable for those who can finance, however frugally, a University course. It is far easier to wait three or four years longer before acquiring the habits and tastes of independence than it is to devote time and money to self-disciplined study once those habits and tastes of independence have become fixed. And in the long run it pays better, not only in salary but in greater freedom of leisure due to better professional equipment, and in complete freedom of the summer vacation. It may be said with confidence that the next few years will see the more desirable positions in High Schools and senior Public School grades virtually monopolised by University graduates. Such a state of things will leave the incoming male teachers of inferior standing only the prospect of a bare livelihood.

Remuneration.- Salaries in rural schools range from \$840. to \$1,400.

In town schools a male teacher is often sought to assist in the general

The Career of School Teaching.

Grade VIII

21 High School Courses, viz...

- | | |
|--------------------------------------|-------------------|
| # Literature 1, 2, and 3. | # Arithmetic 1. |
| # Composition 1, 2, and 3. | Art 1. |
| # History 1, 2, and 3. | Geography 1. |
| # Algebra 1. | # Gen. Science 1. |
| # Geometry 1. | |
| Physics 1 <u>or</u> Agriculture 1. | |
| Chemistry 1 <u>or</u> Agriculture 2. | |
| and FOUR of the following: | |
| # Geometry 2. | German 1. |
| # Algebra 2. | German 2. |
| Art 2. | Greek 1. |
| % Latin 1. | Greek 2. |
| % Latin 2. | Music 1. |
| French 1. | Music 2. |
| French 2. | Man. Training 1. |
| French 2. | Man. Training 2. |
| © Agriculture 1 <u>or</u> Physics 1. | |
| Agriculture 2 <u>or</u> Chemistry 1. | |
| Household Economics 1. | |
| Household Economics 2. | |

Normal
Entrance

Normal
Entrance

Univ.
Matriculation

Univ.
Matriculation

Class 2
Interim Certif.

more H. S. Courses

Normal
Entrance
Class 1.
First Class
Interim Certif.

more H. S. Courses

Entrance to
2nd year Univ.

2nd Year

3rd Year

B. A. or B. Sc.

H. S. Teacher's
Interim Certif.

1st year

2nd Year

3rd Year

B. A. or B. Sc.

H. S. Teacher's
Interim Certif.

Figure 1.-

Alternative Plans for Training
as a Teacher.

Compulsory for Jnr. Matric.

© See Calendar of U. of A. p. 30.

- 14 -

% Jnr. Matric. requires 2 courses
in a foreign language.

discipline and in the organisation of sports. In the public schools such an assistant may receive from \$1,000. to \$1,300. Public school principals in towns range from \$1,400. to \$2,400. according to locality and responsibilities. (These figures are only well-informed generalizations about the prevailing salaries outside of the cities. There are no fixed legal scales; the School Act only prescribes a minimum teacher-salary of \$840. per annum.) In the cities there are attractive salary-scales with regular increments to a high maximum, and the competition for city positions is, therefore, very keen.

There is no provision for the pensioning of teachers in Alberta, this being the only province in Canada where such provision is lacking.

5. Accountancy as a Profession.

Accountancy is the work of keeping accounts in business, whether the accounts of a village meat-shop or those of a great packing plant. Modern industrial and commercial enterprises are much larger in scale and complexity than those of fifty years ago, and accountancy is, therefore, becoming a profession for which a great fund of business knowledge and technical skill is required. As usually happens when a new vocational group of superior training enters the world of affairs, the accountants found it necessary to organise themselves into a professional association "to promote and increase by all lawful means, the knowledge, skill and proficiency of its members in all things relating to the business or profession of an accountant, and to that end to establish classes, lectures and examinations, and to prescribe such tests of competency, fitness and moral character as may be thought

expedient to qualify for admission to membership".[#] This organisation is known as the Institute of Chartered Accountants of Alberta, and is one of the constituent societies of the Dominion Association of Chartered Accountants.

While it is quite possible for a man to obtain excellent accountancy posts without qualifying as a Chartered Accountant, it is safe to say that a man possessing the qualifications and degree of the Institute has today, and will most certainly have in the future, the best prospects in the accountancy field. Any company which submits its books to an audit must satisfy the shareholders that the auditor is competent, and can easily do so if he is a C. A. On the other hand, an accountant seeking a post with an important business firm must show evidence of his capacity, and the letters C. A. after his name are considered as very strong evidence. We shall, therefore, confine ourselves to a description of the training and work of Chartered Accountants.

Training.- A boy contemplating this career needs decidedly good scholastic ability, including reasonable proficiency but not necessarily brilliancy in Mathematics. Ordinarily his training will consist of four years of service as an Articled Clerk to a practising chartered accountant. Before he can be articled he must have passed the University Matriculation requirements in Arts and Sciences, namely the following High School courses:

English Literature 1, 2 and 3. General Science 1.

Composition 1, 2 and 3. Arithmetic 1.

[#]

Act of Incorporation, I. C. A. A. Clause 2.

History 1, 2 and 3.

Courses 1 and 2 of Latin or Greek or French or German.

Algebra 1 and 2.

Four Courses from Physics 1, Chemistry 1, Agriculture 1, Agriculture 2 or Artl, Geography 1, Languages.

Geometry 1 and 2.

(If Geography 1 is chosen, it must be accompanied by Physics or Chemis^try or both.)

During his service as articled clerk he is required, after completing one year, to write an Intermediate Examination. This must be passed, and four years of service rendered, before he can write the Final Examinations of the Institute. Upon passing the Finals and paying the requisite membership fees, he becomes a Chartered Accountant; with this proviso, that he must be twenty-one years of age before he may write his Finals.

Occupation during Articled Clerkship.- The newly articled clerk is given the simplest duties, such as checking of columns, and comptometer work. By degrees he passes on to the checking of vouchers, minor analyses of accounts, etc., until he can be entrusted with small audit assignments which increase in importance until he can assume responsibility for major jobs. During this time the clerk has to do considerable evening study in preparation for his examinations.

Qualifying through the University School of Commerce.- A very attractive alternative to the above plan is provided by the Bachelor of Commerce degree course at the University. Provided that three units in Accountancy are taken in studying for the B. Com., the student may, after graduating, serve only two years in articles before writing his accountancy Finals. He is exempt from the Intermediate Examinations. The School of Commerce offers a broad training in political economy and mathematics (statistics and theory of

finance); with the addition of the requisites in accountancy this constitutes a very fine introduction to a business or financial career.

The minimal requirements of the two plans may be compared thus:

YEAR	1	2	3	4	5	6
Plan						
I	Articles /Inter.	Articles	Articles	Articles	/Finals	
II	Arts or Science#	Comm.	Comm.	Comm.	Articles	Articles/ Finals

Or Grade XII equivalent.

Two Main Types of Accountant.- Upon qualifying as a Chartered Accountant there are two fields which one may enter; these may be conveniently described as Consulting Practice and Executive work. In consulting practice the accountant sets up his office and undertakes audits, investigations, liquidations and similar services for the general public. Perhaps a company goes bankrupt, and the receivers call him in to prepare a statement of its affairs; or debenture holders in a company are uneasy as to its financial state and call him in to investigate and report; or some person with capital to invest commissions him to ascertain whether a certain proposition is sound; or perhaps two firms are about to amalgamate, in which case either or both may engage a C. A. to see that the contributions and concessions made on either part are equitable. A manufacturer with a huge income may employ the accountant to advise him as to all legitimate exemptions from the income tax. Or, a growing business may find it necessary to introduce a new system of book-keeping, and call in a C. A. to recommend the best system for the business and to put it into operation. With increasing frequency Chartered

Accountancy firms are appointed as executors for estates.

The Executive accountant needs no detailed description. He is the full-time employee of business firms, and may be an important technical expert on producing costs and similar features of management.

Remuneration and Prospects.- Leading members of the Institute state confidently that the demand for chartered accountants is increasing and likely to increase indefinitely in the future. While it is difficult to generalise about remuneration, they affirm that this profession commands on the whole quite as large earnings as any other, with a brighter immediate future for the young C. A. than for the graduate in Law, Medicine or Dentistry. For any boy of superior ability, who is willing to undergo a rather laborious training, this field offers very attractive prospects.

CHAPTER II

PUBLIC SERVICES

1. Alberta Government Telephones.

The Alberta Government Telephones operates on the same principles as a private company so far as employment of labor is concerned. Its employees are paid the union wages of the International Brotherhood of Electrical Engineers; and the staff is liable to increase or reduction according to the state of business and the construction programme. Considerable "floating labor" is employed during the summer, but not in expert work.

The permanent staff in 1930 totalled 820, of whom 404 are males. The tendency is towards a slight annual increase with the expansion of the system. There are very few vacancies on the permanent staff - "only one married man left in the last in the last five years, and he came back". The waiting list is a large one, and selection is, therefore, based on high standards.

A boy may start work under the Alberta Government Telephones as a Messenger, a Junior Clerk, or an Apprentice. To be a messenger he must be 16 years of age with Grade X standing in school. To be a Junior clerk he must be 18; his chance of employment is best if he has completed Grade XII, but applicants with Grade XI are sometimes accepted. To become an Apprentice he must be 18 and have completed Grade X.

Apprentices are of four different classes; Switchmen, Cablemen, Line-

men and Inspectors.

The Switchmen Apprentices are trained to understand and undertake the construction, operation and repair of switchboards, and are trained almost entirely in Calgary. (The Edmonton "Central" is part of the city's own system and so not available for this training).

The Cablemen Apprentices learn the business of suspending the heavily-sheathed cables on the poles; of laying them properly in the ground where that is necessary; of detecting the source of trouble; of joining cable-ends, etc.

The Linemen Apprentices work with small gangs of trained men at the smaller construction and at repair work after storms. (The larger line-construction jobs are done by private firms under contract.) They learn the efficient handling of digging tools, the standard hole depths for pole lengths and for different soils, the right way to erect poles, the suspension and other handling of wire. The line-gangs may be considered as the general maintenance force of the telephone system.

The Inspector Apprentices are taught how to maintain the subscribers' phones in working order.

Only the switchmen apprentices are permanent inside workers; the others are required by the nature of their duties to be outside and on the road. An apprentice is trained in only one of the four branches and becomes an expert in that one.

Pay for switchmen, cablemen and linemen apprentices begins at 28½ cents per hour and increases at the end of each half-year by 5 cents per hour until the end of three years, when the apprentice, if satisfactory,

receives \$140.00 per month. On completion of apprenticeship after the fourth year he becomes a full journeyman on a monthly wage of \$162.50. The Inspector apprentice has a slightly different scale owing to travel expenses, but is on about the same actual pay basis.

It will be seen, therefore, that the practical men of the telephone system are paid a very comfortable wage. But there are much more attractive opportunities for the superior journeyman in the highly expert work involved in the installation of repeater apparatus, carrier systems, etc. For such work the more promising men are chosen and sent to Montreal for special training, comprising courses in all kinds of equipment used in the modern telephone systems. Men who work up into this class are paid well, because the demand for them in the ever-widening fields of electrified industry is very great.

Conditions governing sick-pay and old age pensions are very similar to those of the Civil Service (see page 24) though it must be understood that telephone employees are not included in the Civil Service. Annual vacations of two weeks for the inside staff and three weeks for the outside staff are granted with pay after a certain reasonable length of service. Working hours are between 8.30 A. M. and 5 P. M. with a half day only on Saturdays.

The hazards of the work, which might be expected to be serious, are minimised by length and care of training, and the casualties are actually infrequent. All employees are subject to the provisions of the Workmen's Compensation Act.

A boy who is attracted to the field of telephone work is advised to secure all the schooling he can, especially in the Technical Schools, up to the age of 18. The Technical High Schools of Edmonton and Calgary offer two-year courses designed to give a good preparation for apprenticeship in electrical trades; and the Provincial Institute of Technology at Calgary is excellently equipped and staffed for instruction in the line and switchboard work.

The Head Office looks for applicants who show evidence of good educational grounding, ability to work in harmony with others, good steady character, and habitual courtesy to the public. Personal application for an apprenticeship should be made to the person in charge of the local town or village office. If that person is not himself (or herself) authorised to interview applicants, he will give the necessary information about steps to be taken in order that the applicant may get his name on the waiting list at Head Office. An application form has, in any case, to be filled in, and the applicant must make sure to obtain this either from the local office or by writing to -

The Deputy Minister,
Alberta Government Telephones,
C. P. R. Building,
Edmonton, Alberta.

1

The Edmonton and Calgary Technical Schools are provided by the respective City School Boards for the children of city residents, and do not usually have accommodation for outside students. The Provincial Institute at Calgary is, on the other hand, for the service of all young people of Alberta.

2. The Civil Service

You all know something about the Government of Alberta. You are quite familiar with the electoral system, the activities of the Legislative Assembly, and the chief duties of the Ministers of various departments of the government. These constitute the legislative and regulative side of government; that is to say, they are concerned with making and changing laws, controlling taxation and expenditure of provincial revenues.

But the Legislature is in session only about eight weeks annually, and the business of the Province has to be carried on throughout the year. This is done by a staff of officials and clerks known as the Civil Service. Think for a moment of the business involved in maintaining law and order in Alberta. Police have to be trained, directed in their duties, paid their salaries and travelling expenses and provided with uniform and living quarters. Records must be kept of arrests, trials, admissions to and dismissals from jail. Accounts must be kept of fines, costs of court and all other financial details. A vast amount of correspondence must be answered. Evidently these duties of government require the services of skilled lawyers, ledger clerks, stenographers, filing clerks and messengers. Similarly all the other Departments have their administrative duties for which suitable persons must be employed, and all these employees form the Civil Service.

The Civil Service may be divided into six major classes as follows:

- I. Deputy Ministers and other high permanent (i.e. not elected) officials.
- II. Officials employed for special professional or technical work; e. g. school inspectors, road engineers, mental hospital doctors, etc.

- III. First class clerks; persons who are responsible for the efficient work of a number of subordinates; chief clerks in various sections or branches of departments.
- IV. Second class clerks; persons who do skilled work requiring experience and judgment, but ^{under} direction and supervision.
- V. Junior clerks, including stenographers, filing clerks and others at the least responsible level.
- VI. Provincial Police and other employees not under authority of the Civil Service Commissioner.

Of the above, Classes III, IV, and V comprise the great majority of the people employed in the Legislative and Administration Buildings of the Alberta Government at Edmonton. There are about 1,000 of them, and they form a single staff in the sense that promotion is continuous from the level of junior clerk to first class clerk. About 60 percent of the 1,000 are males. Vacancies during the year average about 100, of which less than one-third are males.

Salaries.- Third class clerks begin at \$700.00 a year, rising \$25.00 each year to a maximum of \$775.00. Promotion to the second class depends upon merit and vacancies. Within the second class of clerks the salary scale climbs by increments of \$50.00 per annum from \$800.00 to \$1,600; but within this class there are four divisions, and promotion from a lower to a higher division again depends upon merit and vacancies. The first class of clerks is somewhat similarly divided, with salaries rising from \$1500. to \$2200. Promotion takes place usually within the department only; that is, one cannot expect to move ^{from} a third class clerkship in the

Provincial Secretary's Department to a second class clerkship in the Ministry of Health. This often means that promotion is much more rapid in one department than in another for equally good workers. But in any case, vacancies at the upper levels are so few that promotion is slow even for the most fortunate.

A male employee in the lower classes, providing his services are satisfactory, receives an immediate rise to \$100.00 per month if he marries; on the sound principle that any man who is worth employing should have the means to support a home if he desires to do so.

Attractive Features.- Various features of Civil Service employment combine to make it attractive in spite of slow promotion. The Sick Leave provisions are generous; for example, a clerk of five full years' service may receive as much as 13 weeks' full pay and 13 weeks' half pay in case of long sickness. Vacations after a year's service are 3 weeks annually, with about 13 odd holidays during the year. Working hours are from 9. A. M. to noon and from 1.30 to 5 P. M. daily except Saturday when they are from 9 to 1. The Civil Service Pensions plan deserves special notice. A deduction of 4 percent is made automatically from the employee's salary, and this, combined with a government contribution and accumulating interest assures him, on retirement at the age of 65, of an annual income till death equal to about 83 percent of his previous salary. Finally, security is one of the chief attractions of the service. Whether times are good or bad, the business of government has to be done, and there is very little danger of dismissal or cut in salary for the steady worker.

Application.- Competition for the Civil Service is, therefore, keen, and there is a perennial waiting list of applicants. You can get your name on the list by writing to the Civil Service Commissioner, Legislative Building, Edmonton, for an application form, which you must fill in and return to him. Your chances will be improved by advanced High School standing; Grade XI at least. If you have an opportunity to come to the city and see the Commissioner personally (by appointment) so much the better, for a personal interview will be necessary, in any event, before you can be engaged.

3. Alberta Police Forces.

The tables on the following pages have been prepared from official information and will supply most of the facts about remuneration, working hours and other conditions of police service. Only a few further remarks are necessary.

The Provincial Police.- A large proportion of the Alberta Provincial Police constables serve "on detachment", that is to say, they are posted in towns and villages all over the province. When on detachment they are responsible for maintaining law and order whenever and wherever necessary. Their duties are surprisingly varied as may well be imagined. If a woman phones in to say her husband is "beating her up" the constable must intervene tactfully but firmly. If a slanderous anonymous letter is referred to the authorities, he may have to track down the writer. And it is not merely his business to wait for calls. The provincial statutes are his instructions,

(Salary per month save where indicated.)

[illegible]

TABLE III

Information Table of Alberta Police Forces

Age	21 to 35				
Admission					
Education	Able to read, write and render good report.	No set standard; fair education necessary.	No set standard; Grade X desired.		High School desirable.
How To Apply	Write Commissioner, A. P. P. Edmonton for form.	Write Chief Constable for form.	Letter in own writing with all personal particulars to chief constable.		Apply in person to Chief Constable
Working Hours	Liable to call every day at all hours.	48 hours a week.	48 hours a week.	48 hours a week.	
Holidays	2 weeks per year with pay.	2 weeks with pay. Higher ranks a little more.	2 weeks with pay. Higher ranks a little more.	2 weeks with pay. Higher ranks a little more.	
Vacancies	About 10 per year.	Infrequent	5 per year.		Average 3 in 2 years.
Sickness Allowance	Reasonable treatment.	Annual sick leave 2 weeks with pay.	Sickness & Accident fund covers 70 days sickness with 80% of full pay.		2 weeks with full pay.
Pension Scheme	Half-pay retirement after 20 yrs. Three-fifths pay retirement after 25 years.	None yet.	Approx. half-pay on retirement at age 60		None.
Retiring Age	None				None.
Compulsory Life Insurance	None	Under consideration, likely 60 or 65.	60 years.		None.
Casualties last 5 years	3 deaths; occasional injuries	May have \$1500. life City pays 1/3. 1 seriously wounded but recovered	Must have \$1500. life City pays 40%. None resulting in disability for more than few days		None.
Total Strength	190	78	85	10	

and he must be alert to see that in his territory they are being obeyed. If an inordinate amount of hard liquor is circulating in the country he must be on the lookout for a still; if a travelling movie operator is touring the country, it is his business to see that the Amusement Tax is being collected and sent up to the Provincial Treasury.

While on detachment the constable is provided with quarters, light and fuel, and a travelling allowance, and, of course, with uniform. These additions to his regular salary make him financially fairly comfortable.

An A. P. P. constable who wishes to marry must obtain the permission of his Commanding Officer (the Commissioner) before he may do so. A certain number of men have to be kept 'footloose' for emergency transfers.

City Police.- In addition to the traditional duties of guarding property and quelling disorder in public places, the city police constable is becoming increasingly loaded with the enforcement of by-laws concerned with the control of street traffic. He is responsible for the observance of parking, driving and pedestrian regulations. In the event of an accident he must obtain a true account of what occurred, and deliver it in good written form at the Police Headquarters. The prime requisite for these duties is a tactful but resolute manner and a steady, sober way of life. The policeman is really paid by the public to work for the public's safety and comfort; his duty, therefore, is to take such action as he judges necessary to ensure safety and decorum on the streets without provoking public resentment by undue severity over trifling errors.

The investigation of thefts and other criminal offences devolves

upon the detective branch of the service, consisting of about a dozen men in each of the two larger cities.

CHAPTER III

AGRICULTURE

Conditions prevailing in Western Canada during this Spring of 1931 are such as to make the most experienced observer hesitant in generalizing upon the subject of Agriculture. The Edmonton quotations for the highest grades of grain are about 35 cents per bushel for wheat, 16 cents for oats and 14 cents for barley. The return of Russia into the wheat market is a normal result of her resuscitation. The enormous expansion of Canadian wheat acreage is hardly more remarkable than the expansion in Europe and South America. In brief, the grain-growing basis of our agricultural life is badly shaken and may have to be rebuilt on lines of cheaper production, or even replaced by other farm activities which offer a better livelihood. The layman readily seizes upon the latter idea and raises the cry for diversified farming, only to meet the sound argument that any marked increase in stock or dairy output would demoralise the market for these products. The various "pools" of farm commodities, formed with a view to orderly marketing, are bending under the strain of general depression and under the assault of competitive commerce; nobody knows their future.

It would be folly, therefore, to attempt here any dogmatic statement upon the vocational possibilities of various branches of farming. The present distress will almost certainly redirect the energies of our farming people in such ways as to stultify anything which one might say today about demand and supply.

Diversified Farming.- It seems wiser and more useful to place emphasis upon ^{one} or two aspects of the agricultural problem. Mention has just been made of the laymen's noisy advocacy of diversified farming as a panacea for farm troubles. While such diversification is not likely to bring into Alberta the streams of money which have hitherto flowed with the wheat from the grain-spout of the thresher, it can, nevertheless, be expected to ensure to the farm dweller more home-grown provisions and correspondingly less stretching of credit during hard seasons. Comparatively few farm gardens, for example, are planted for a twelve-months' supply; and successful winter storage is seldom found. The modicum of stock and poultry which will provide winter meat has frequently been rejected from the farming programme because the chores entailed shorten the working hours on the land. Without questioning the wisdom of past policies - when big crops spelled big money - we may well believe that the time has come for the multiplication of those farm activities which will fill the root-cellar and the pantry in a more direct way.

Diversification of farming may prove useful in less familiar ways. We know of one homesteader in a backwood district who planted small fields of sweet clover near his buildings and made handsome profits from three hives of bees, besides adding materially to his supply of stock-feed. The cities of Alberta afford an excellent market for strawberries which can be grown on a commercial scale in this province. There are numerous other lucrative lines of production which can be developed here to take the place of our deflated wheat currency.

Farm accountancy.- The agricultural life of the West has been for some years a succession of crises, due partly but not wholly to the vagaries of the crop weather. If the people can subsist during a ten-year period upon the products of their farm, it is obvious that they are not the helpless victims of periodic blows of fate, but rather are not yet able to budget expenditure conservatively. Nor is that to be wondered at, since the recent trend towards tractor farming with its short-hand disposal of the old slavery of clearing and breaking land, has in very many cases seemed to prove the wisdom of the courageous purchaser of more land and bigger equipment. But underlying all, some pertinent questions have remained unanswered. Is tractor farming economical, when the farmer needs work horses anyway? Is a small farm worked intensively as profitable as a big farm worked extensively, when taxes, fences, hired help and other factors have been calculated? What crop acreage justifies the purchase of a private threshing outfit? Is the erection of machine sheds justified by saving of machine depreciation? These are but a few of the problems of farm accountancy which must probably be solved by every man according to the location and other conditions in which he is working.

Amateurism out-of-date.- The generation of Alberta farmers which is just passing consisted quite largely of men - and women - who entered agriculture from the ranks of other diverse occupations. The London retail clerk, the delicate minister, the ex-soldier and the mill-boy who "made good in the West" have been the joy of the journalist and, quite rightly, the pride of their fellows. We shall have a few more of them yet; but

the conditions which favored them are passing away. Good land on homestead terms is scarce, save where its remoteness imposes a heavy handicap in freight rates. The broad miles of free grazing which made many a man's little fortune in beef are gone. The margin of profit on a bushel of wheat has vanished, and the vast extension of wheat acreage in four continents makes it fairly certain that supply will not lag so far behind demand as to restore the margin of profit to anything like its old dimensions. The conditions which favored the amateur opportunist of the past are, we repeat, passing away. Success in farming here, as in the older lands, must henceforth depend upon the same qualities which make a successful business man.

The Future.- What has been said so far does not imply that the golden age of agriculture is past, but only that the happy-go-lucky day is past. The demand for human occupation and sustenance is such that our rich acres (and our poorer acres too) are going to continue supporting a busy population. The interests of every section of the Dominion demand that this population shall earn a living and a surplus. We have been successful in doing that so far, and the significance of the present crisis is that we may have to devise new ways of doing it. The ingenuity of man, which has never been challenged in vain, is challenged now.

Education for Agriculture.- If the above cautious generalisations are sound, it follows that the farmer of the future must grow up to the new stature of his job. If the market will not take more of his products, he must diversify his products outside of his present practice. He must improve his products so as to enter markets now indifferent. He must

meet the imminent pests of sawfly, sow thistle, etc., before they send his production costs soaring. He must bring the eye of a shrewd accountant to bear upon all his activities. He must profit by whatever wisdom and expert knowledge is available. In short, he must be a trained man.

The training, fortunately, is available at six provincial institutions, of which the following details may be useful.

I. The Institute of Technology and Art, Calgary. A five months' lecture and workshop course in Farm Construction and Mechanics, comprising Gas Engine and Tractor, Woodwork, Cement and Brickwork, Farm Machinery, Forging. Fees are \$30.00 for the whole course. Also short Tractor courses during the Winter, to familiarise farm workers with operation and common troubles. Fees \$17.00.

II. The Provincial Schools of Agriculture at Claresholm, Olds, Raymond and Vermillion. A two-year course (late October to end of March) with instruction in Animal Husbandry, Field Husbandry, Poultry, Horticulture, Farm Mechanics, Veterinary Science, Soils, Dairying, Management, etc. Also a one-year course for pupils of Grade XI standing, in which Agricultural subjects take up the whole time. These courses are essentially practical, since there is a large, fully staffed and equipped farm at each school.

III. The University of Alberta. The Faculty of Agriculture offers courses leading to the degree of B. Sc. in Agriculture. This is a four-year programme, in which a thorough and advanced training is given in all branches of Western Canadian farming, as well as in the related sciences. Here also the training has an essentially practical character, the University farm being

excellently equipped and stocked.

For particulars of the several Institutions the student is directed to write to the following:

Dr. W. G. Carpenter, Principal, Institute of Technology & Art, Calgary.

Minister of Agriculture, Edmonton. (for Calender of Schools of Agriculture.)

The Registrar, University of Alberta, Edmonton (for University Calender.)

CHAPTER IV

EMPLOYMENT IN GRAIN COMPANIES' ELEVATORS

The following article is based upon information given by officials of five leading elevator companies in this Province. We shall refer exclusively to elevators operating at rural points for the purchase of grain from the farmer.

The number of country elevators operating in Alberta during the past five years was as follows:

1924	948
1925	979
1926	1011
1927	1078
1928	1216
1929	1559

While these figures can hardly be considered as forecasting the future trend of elevator building, they indicate the present magnitude of employment in the grain-buying business.

These elevators are managed during most of the year by one man; the Agent. During the rush season, which opens with the threshing, a helper is employed by the day. A very small proportion of elevators employ both Agent and helper throughout the year.

The Agent.— The following list comprises the duties of the Agent.

1. Soliciting business. He must make wide and favorable acquaintance with the farmers of his district, inspiring confidence and good feeling.
2. Weighing loads, judging grade and issuing cheques.
3. Testing samples for moisture, estimating dockage for weed seeds or other foreign matter.

4. Keeping books. The Agent must record carefully all grain received and payments made; must record and collect all storage charges; must record the nature and amount of all shipments out of the elevator; and must send copies of these records regularly to Head Office.
5. Keeping plant in good condition and repair.
6. Sale of certain bulky commodities such as flour and coal. Only some of the companies engage in these 'side lines'.
7. Knowing and observing requirements of the Grain Act.

It is quite evident from the above list that an elevator agent can find good use for his abilities as a solicitor of business, an office man and a general mechanic.

To fill the agencies the elevator companies look for men of at least fair education with a background of agricultural experience, good knowledge of different breeds of grain (Marquis, Garnet, Reward, etc.,) and good judgment as to its condition (perfect, tough, bleached, etc.) They naturally find it good business to employ in a given district^a men whose religious, national and other affiliations will make him acceptable to the people whose business he has to get. And they are finding it still better business to employ men of moderate and dependable habits, who can be trusted not to imperil the Company's interests by gambling, drunkenness or irregular hours on the job.

One of the largest companies make a definite appeal for men of university education to come into the grain business. While the man of limited capacity and outlook may be efficient in the routine of the elevator,

he is not usually fitted for the more responsible duties of supervision. A man of sound education who entered wholeheartedly into the duties of the country elevator, and endured for five or six years its manual duties and its pervading dust, would acquire a technical insight which combined with his alert intelligence would make him very valuable to his Company.

Remuneration of Agent.- The monthly salary of the Agents varies among the companies. The minimum ranges from \$75.00 to \$115.00, and the maximum from \$130.00 to \$160.00. And, of course, salary varies with the amount of business normally handled by the elevator which the agent is managing. No bonuses are given for exceptional business records. Where a cottage is provided, it is rented to the agent at a rate based upon building cost and depreciation.

Agent's Helper.- During the Fall, the movement of grain is so rapid and voluminous that many, perhaps most, country elevator agents find it necessary to hire helpers. It is as a helper that a young man can get experience of elevator operation and make himself favorably known to the company. The helper is hired by the day. His duties are to keep the place clean, to see that machinery is oiled and ready for operation at all times, to prepare cars for loading, test samples for moisture (after a little practice under supervision) and make himself generally useful. His monthly salary ranges from \$50.00 to \$90.00.

Supervising Officials.- These are of two grades. Immediately above the elevator agent is the Travelling Superintendent, who makes the round of some twenty or twenty-five elevators and sees how efficiently the agents (and

helpers, if any) are doing their work, keeps them posted as to standards of grading, and takes care that the Grain Act is being observed. Ranking above them are the Divisional Superintendents, who maintain offices, receive and check the daily reports from the agents, direct the work of the Travelling Superintendents and exercise general supervision over a division of fifty to seventy elevators.

These supervising officials are important people. They form the liaison between the local plant with all its activities of buying, weighing, grading, storing and loading on the one hand, and the general directorate of the company on the other. They have the opportunity to know the industry right from the grainfield to the mill; and if there is room anywhere for greater economy or efficiency in handling grain, they are the people who should be alert to discover and explain to the directors, how it can be effected. It is here that one at least of the great Canadian companies feels the urgent need of enterprising men of good education. "The Grain business", says its Vice-President, "needs men of a type that can be advanced, and that is the University student, who by his training has developed a mind that has initiative for his business future; not meaning by that, that his University training is literally of any value to him in the grain business but that it is a foundation for keener thinking and vision to take care of emergencies." The same correspondant goes on to deplore the tendency of college men to cling to the office side of the business, when the greater future awaits

the man who will serve his apprenticeship in the dust of the elevator for a few years, learn his grain thoroughly, and qualify for the higher posts of the company. (See rather similar statements by Packing Plant owners.)

The remuneration of Travelling Superintendents is revealed by two companies, and probably ranges generally from \$200.00 to \$275.00 per month. The Divisional Superintendents salary is stated by one company as from \$300.00 to \$500.00.

Promotion throughout the grain business is on the basis of a man's value to the company. Success as a buyer, knowledge of grains, reliability and intelligence are the chief factors. Promotion, while not automatic, follows this general route: helper - part-time elevator agent - full-time agent - full-time agent at larger centres - travelling superintendent - divisional superintendent.

In conclusion, it must be pointed out that the present condition of the wheat market and the emergence of new wheat-exporting regions makes the outlook for the Canadian grain business somewhat uncertain; on the other hand, the struggle for survival of the Canadian grain-growing industry will require the services of very superior men; therein lies opportunity.

CHAPTER V

RAILWAY EMPLOYMENT

To give an exhaustive account of the different occupations which are included within a railway system is too great a task for the scope of this work. We shall only attempt to indicate those branches of the railway staff which absorb considerable numbers of men and which lie between the status of casual labor and that of executive responsibility. We have been at some disadvantage in dealing with this great transportation industry because two companies monopolise the field in Alberta, and one of them has been quite sparing of information along certain lines. In view, however, of the levelling-up tendencies of the trade-unions, and the fact that the two companies perform exactly similar services to the public, it is fair to say that the following paragraphs give a close approximation to the facts about railway employment in general in Western Canada.

I Employment at Country Stations.— One company has, outside of the four major cities, some 250 stations in Alberta. These stations are maintained by the following staff:

Station Agents	224
Operators	98
Assistant Agents	56

The spread of wages from the lowest assistant to the highest agent is all the way from \$70.00 to \$250.00 per month. The range of assistant's

pay is about equal to that of rural teachers; that of operators is about equal to that of town high school teachers; that of agents is about equal to that of city high school assistants.

A new man begins as assistant agent. He is required to be 18 years of age, of good physique, manners and character, and with atleast a good elementary education. (Competition is such that a good high school education improves the prospects greatly). His duties as assistant include checking and handling baggage and freights, compiling station reports, and general work around the station and yards. If a vacancy as operator is bulletined in his district, he may apply for it; if he is an efficient worker and senior applicant he gets his promotion.

As operator, he copies and delivers train orders, reports the arrival and departure of all trains; receives and sends telegrams, sells tickets and performs other duties assigned by the Agent. As he acquires experience and seniority he becomes eligible for promotion to Agent.

The agent transacts all the company's business at his depot. He gets business for his company, and does the necessary correspondence of the day. Where, as often is the case, he is the only man on the station staff, he does duties we have already listed as the operator's.

Openings in this branch are not likely to be plentiful in the near future. Apart from the business depression, there is a trend towards mechanisation of control at intermediate stations, by means of block signals, and remote control switches and signals. A number of experienced operators

and assistants are at present 'laid off' and hold the first claim to future openings. Nevertheless, there is a limited field of opportunity in station personnel, since vacancies occur and new lines require new staffs.

School Training.- The Institute of Technology and Arts, Calgary, offers a good course in preparation for this vocation, known as the Railroad Station Agents' Course. This is a two-years' programme including units in Agents' Duties, Telegraphy, Typewriting, Railroad Geography, etc. Any boy is strongly advised to investigate this course before paying money to some foreign correspondence school which holds out guarantees - worthless guarantees - of employment after training is complete. The Institute is maintained by Dominion and Provincial money, for the purpose of rendering vocational services to our young people; and it is to be expected that it will be more anxious and more able to assist in the placement of its graduates than any foreign correspondence school. (Telegraphy courses are also offered by some city colleges. The Alberta College, Edmonton, has good day and evening courses.)

II Locomotive Engineers.- Here is a job with far more laborious and thorough training than the travelling public dreams of. The young engine driver begins as a classified laborer around the yards at some centre where there is considerable movement of freight cars. There he does cleaning and other chores for a year or two, and learns all he can about the yard-engines; for example, the various mechanical controls, the firing and water-feeding. If he is the brightest boy available, he

will be selected after a time for duty as fireman, usually on a yard engine. His next promotion will be to freight-train fireman, and later on to passenger-train fireman. During these periods he is closely associated with the drivers under increasing responsibilities. After three years or so of this firing he may be called in to write examinations qualifying him to become a locomotive engineer. If he passes, he goes back to his firing to get more practical experience and to await his chance of promotion. After anything from 3 to 5 years he may get his promotion to engineer. In that event, he goes back to the yard engine as engineer; thence to the freight engine on the road, and thence to the most responsible position as driver of a passenger train. The man who steps up to this job has behind him from 12 to 15 years of experience in locomotive work.

There are a few supervisory posts to which the driver may aspire, such as those of Road Foreman of Locomotives, Master Mechanic, Travelling Fireman and Travelling Locomotive Engineer.

The wages in this responsible occupation are decidedly good, and justly so, for it demands men of great practical intelligence, strong physique and wholesome habits.

III Railroad Shop Tradesmen.— These are the employees of the repair shops which are located at widely distributed points along the transcontinental lines. (The C. N. R. shops are at Calder, just North of Edmonton.) Machinists, boiler-makers, blacksmiths, carmen and electricians are employed in the shops.

Boys are admitted between the ages of 16 and 21 as apprentices to these trades under conditions agreed upon with the respective unions. They must have Grade VIII school standing, and must pass a physical examination. Admission to apprenticeship is restricted to one for every five journeymen in each craft. Initial pay is 30 cents per hour, rising gradually to 74 cents per hour in the second half of the fifth year.

During apprenticeship the boys are fetchers and carriers and general helpers of the journeymen, and are gradually moved along to jobs requiring skill. They receive special instruction in the mechanics and draftsmanship of the shops. On completion of the five-year apprenticeship term the lad becomes a tradesman with two years' seniority over any tradesman admitted to the shops from outside. Thereafter they receive the union wage of their craft, which is good money; but their livelihood is rather at the mercy of business conditions, since the amount of work to be done varies greatly with the amount of commercial traffic.

IV Trainmen and Conductors.— "Any able bodied man of 21 years or over, with high school education, who is industrious and possessed of initiative and tact, is eligible for employment as trainmen", says one company official. He is first of all a freight trainman, then freight conductor, then mixed train conductor, then moves up to first-class train staff. He must serve as freight trainman for three years before he is eligible to write his examinations for promotion to freight conductor. His duties will depend partly upon whether he is 'head-end' or 'rear'

trainmen; in the former case he is responsible for piloting the engine from the roundhouse track to the train and coupling it on to the train. In the latter case, he looks after the rear-end marker lights and if necessary lets off the handbrakes ready for moving. Both trainmen must keep a sharp lookout for hot boxes or other defects of the running gear during the trip and must work under the instructions of the conductor.

The conductor has charge and supervision over the running of the train. If it is a freight-train, he must receive the train orders, see that the engineer gets a copy, check his watch with the engineer's, wait till the air brakes on each car have been tested, and start. During the trip he must make a list of all car contents for the yardmaster at the far end. He must be sure that his train reaches each sidetrack, where a superior train is to pass, in good time to prevent the latter from having to wait. And, he must generally supervise the checking of running gear at regular intervals, besides watching the air-gauge to see that the brakes are in good order, and keeping a look-out on approach to depots to be sure the signals are clear.

The conductor and trainmen have comfortable quarters in the caboose. On way-freight, mixed and passenger trains they have the advantage of continuous employment. They are paid on a mileage basis equivalent to about \$6.25 per eight-hour trip for conductors, and \$4.91 for trainmen.

On the whole, the railroad cannot be considered as offering an attractive field of opportunity. The labor turn-over in the branches we have described is very small, and various factors have contributed to produce an over-supply in some of them. Mechanical distance-controls, greater locomotive power

resulting in longer and fewer trains, the increasing competition of automobile and truck, are all combining to cause a shrinkage in the personnel requirements of the industry. A boy is well-advised, therefore, to have his plans well-laid and his first employment fairly assured, before he decides upon entering the service of the railways.

CHAPTER VI

COMMERCIAL AND BANKING CAREERS

1. Male Employment in Departmental Stores

We shall confine our description in this section to the greater departmental stores of the cities. The organisation of the small-town store is too simple and familiar to require explanation, consisting as it does of warehouseman, counter-clerks, office-clerks and delivery-boy on bicycle; with the proprietor-manager making himself useful everywhere.

The large city stores, such as "The Bay" or Eaton's, have a very elaborate staff organisation. The male employees vary from about 35 to 45% of the total staff. Their number ranges from about Two Hundred and Fifty in the largest store to about Fifty in the less pretentious yet important houses.

Let us consider the business briefly from the ground up. All the goods come from the wholesale warehouse, brought in by truck - or van - drivers and their boy helpers. The goods are unloaded into the basement, unpacked and sent up to the selling floors. The stockmen and their boy helpers attend to this. As the goods pass into the store and up to the counters, record is made of them by the sheet-writers. At the counters the goods are displayed, sold and kept in attractive order by the sales clerks. Supervising the sales there is a floorman, who is responsible for the smooth running and efficiency of one major section of the store, such as the furniture or children's clothing. He has an assistant whose special business is to see that goods are

coming up from the warehouse to the counter as needed. Still higher than the floorman is the buyer. It is his business to know what the public is asking for and to anticipate its requirements for the season ahead; and this knowledge and judgment are gained by keeping ⁱⁿ touch with the sales staff. Part of his time he spends in the East buying the stocks of goods which he knows are needed.

Two other busy and important people must be mentioned here; namely, the sign writer and the window dresser. The former is responsible for maintaining the supply of showcards which catch the eye as we pass through the store - announcing the special offerings of the day. The window-dressers are artists in their way. They tell the store news by what they display; they display just enough to attract the eye, and not enough to confuse it. They know the theory of color, and can select for display just those goods which will enrich each other by pleasing contrast.

Not all the goods sold go out under the customer's arm. A large portion are delivered to the home, and this necessitates a staff of parcel wrappers and delivery men. These are all the personnel we shall consider at the goods-handling end. Cashiers and office help belong to the general business girl class, with which we are not concerned. The larger firms have, besides the goods-handling staff, a small but highly-paid staff for plant-maintenance, including carpenters, electricians, engineers and garage mechanics.

Remuneration.- Information as to scales of wages is not readily obtainable from official sources. The following partial list is offered by

one firm may be considered as fairly representative.

Sales Clerks	\$15.00 to \$25.00 per week.
Janitors	\$20.00 to \$25.00 per week.
Truck and Van Drivers	\$20.00 to \$25.00 per week.
Accountants	\$20.00 to \$40.00 per week.
Assistant Floor-men	\$25.00 to \$30.00 per week.
Managers of Departments	\$25.00 to \$50.00 per week.

All boys who show enough adaptability to warrant promotion from the parcelling, messenger and helping jobs to positions of responsibility will normally reach a four-figure income in about four or five years. Since no company cares to keep grown men in the lowest jobs, a boy can expect either to be laid off if he does not prove promotable, or to reach home-supporting status in a reasonable time if he is promotable.

What qualities make a boy promotable? Intelligence, reliability, industry and honesty of course, since no manager is likely to award the prize of a better job to a worker who is stupid, or never to be found when wanted, or untrustworthy with cash or goods. But there is something more that the staff-manager looks for, which we may illustrate by comparing two sales clerks. The first does a conscientious automatic job, selling goods when asked for them, keeping a tidy counter and handling cash correctly. The second one does that and a little more. He is a little more helpful and genial with the public; he keeps mental note of things which are selling well and of other things which just fall short of what the public wants, so that he can give useful information if required to the department manager or floorman. In short, he is looking at his job from the viewpoint of the next higher man, and is doing it a little better for that reason.

It will not be surprising if he is marked down for one of the "next higher" positions. The same holds true right down to the parcel-boy. Most of the firms consulted in this inquiry place little stress upon self-advancement through night-schools and correspondence courses; they place more faith in the boy or young man who applies all his intelligence to his job during working hours, and makes his paid time as profitable to the firm as he possibly can.

How to get Employment.- Boys are eligible for employment from fifteen years of age to twenty-five. Beginners may be placed as messengers, parcel boys, salesmen or helpers in stockroom and delivery work, according to education and personal qualities (manners and appearance). Application should be made in person to the Employment Manager whose office is in the store. Openings are most numerous in the Fall.

Working Hours, etc.- Daily working time varies with the company's operating methods and the particular job, but 8.30 A. M. to 6 P. M. is typical. Employees generally have two weeks' vacation with pay after a year's service. Some firms cover all employees with insurance against sickness; others have a Staff Welfare Association which manages a Sickness Fund regularly contributed by the members; others treat each sickness case on its merits.

2. Wholesale Trade.

Let us understand first of all what is the place of Wholesale Trade in civilised life. If you look at the goods displayed on the shelves of

any general store, whether it be in Calgary or in some remote village of the North, you will see - if you are curious enough to look - what a vast proportion of the stock is brought from foreign or Eastern Canadian sources. It would be quite a mistake to suppose that the store proprietor himself purchased rice from the Japanese merchant, or shoes from the Ontario manufacturer, or coffee from the planter in Java. Such a method of distributing merchandise would throw our railroads into confusion, double the price of goods, and give the consumer very slow and meagre service. Indeed, it would prove quite unworkable.

Instead of that, the storekeeper buys from the wholesale merchant, who in turn buys from the importers (at such points as Montreal and Vancouver) and from Canadian manufacturers of various goods. A wholesale merchant in Edmonton, for example, may have a hundred small-town merchants as his regular customers. Every few months he finds out what stocks they are likely to need, and from East and West gathers in his supply, which he distributes to them by rail or truck as called for. We can make a fairly true chart of the commercial system of Alberta if we draw four broad streams to represent goods shipped wholesale from Vancouver to Edmonton, Vancouver to Calgary, Winnipeg to Edmonton, and Winnipeg to Calgary; and then draw much narrower lines radiating outwards to represent the same goods being doled out to the small town retailers all over Northern and Southern Alberta. The wholesale merchant is at the centre of the star.

Now we are ready to see what sort of organisation the whole-sale trade may require; and we will start by supposing that a railway car-load of hardware from Winnipeg is standing on the track at the back of the warehouse. First, there must be able-bodied men to unload the goods from the car into the stockroom. Then there are others unpacking the cases where necessary, (that is to say, those cases which contain too many articles for a single order from the retailer). Then there are boys who receive the unpacked goods and put them in their proper place on shelf or table. And there are checkers who see that all the goods invoiced have been received.

Now let us go to the store keeper. He has finished stocktaking and has listed his requirements for the coming months - nails, foot-warmers, skates, lamp-generators and hundreds of other lines of goods. He mails the list to the wholesaler with whom he deals. In the wholesale office there must be clerks to receive and acknowledge the order; stenographers to prepare copies of it for the stockroom workers, the checker and the files. A copy is sent down to the stockroom, where the boys "fill the order" by gathering the articles in one bin. Then the checker comes along, marks off the goods on his copy, and notes the explanations of any omissions. The packers prepare the consignment for shipping; that includes packing and labelling (with tag or stencil and brush). Finally the truck-men carry off the consignment to the station freight-sheds, or themselves deliver it to the retailer.

Buyers.- In a complex business like Hardware or Dry Goods, the merchandise is divided into Departments. (You may find them listed in the

Telephone Directory under the firm's name.) Each Department has a head man who is both Manager and Buyer. As Manager he must know his stock thoroughly; he must observe what sells out rapidly and what tends to stay on the shelf; he must know the reason for that; he must know what local conditions of crop or weather affect the retailers' orders and why; and he must be able to make a good forecast as to how much stock of various lines he must get in for the season. His close intimacy with the Department as Manager makes him well-qualified to act as Buyer. So he makes two or more trips, East or West as the need requires, during a year, and buys the goods for his Department. Here expert knowledge of the goods is most essential. Two flannel shirts which may appear closely similar to you or me reveal quite different qualities of cut, texture and stitching to his experienced eye, and he will know whether to accept or reject the manufacturer's price on either of them.

Salesmen.- These include the travelling salesmen, more familiarly known as commercial travellers or "drummers". They travel from town to town with their sample cases, meeting the retailers, offering them new lines of goods, hearing their complaints if any, soliciting business with new stores, and keeping themselves well-informed about local business conditions and public demands for merchandise wherever they go..

The larger wholesale houses have also a few (from three to six or so) desk salesmen. They receive inquiries over the phone or through the mail, and return whatever information as to prices, etc., may be required. Frequently they are able, by prompt and satisfactory response, to secure

an order. To do this, they must have a thorough knowledge of the stock in its various lines and prices, so that they can present the information clearly and without delay.

Opportunities.- Vacancies do not occur very often in those firms which were consulted, due, as one of them explained, to the fact that wages are fair and working conditions good. (No other information as to wages was offered.) For trucking or loading jobs only men are hired. Boys who seek employment in the stockroom or office should have as much high school education as possible. If employed, the ^{boy} may be set to work in the office as messenger with promotion through various clerical duties up to accountant. Or he may be put in the stockroom of any department, where he will distribute the goods on the shelves or tables, wait upon retail buyers who come to make their purchases in person, and fill mail orders. If he shows ability, he may be made foreman of the floor, and later on checker. After that there is promotion for a boy of good manner and thorough acquaintance with the stock, in either of the selling lines - as traveller or desk salesman. The best salesmen are candidates for positions as Department Manager.

It will be seen that in the Wholesale Business (as in Meat Packing, Grain Buying and other concerns) the best prospects are for the boy who brings sound intelligence to the actual handling and learning of the goods.

It is difficult to generalise further about Wholesale Trade as a vocational field. Staffs in Alberta range from One Hundred and Twenty-five (in the case of a Dominion-wide hardware business) to two or three (in the

case of a grocery house which does no warehousing at all). Some firms have no stockroom because their goods are only in one or two lines. Others may have several. The above description sets forth the organization of a large and complex wholesale business.

3. Bank Employment.

There are some Two Hundred and Seventy branch banks in Alberta, employing about Eleven Hundred male workers. [#] Openings for boys vary with the general state of business; there have been hardly any during the year 1930, whereas during prosperous times the annual replacement may be as high as eight percent of the personnel.

A boy is accepted for bank employment between the ages of sixteen and nineteen. Only an exceptionally promising lad can get in after twenty. There is, says one experienced city manager, no advantage in leaving high school to enter the bank before eighteen years; it is better to take the opportunity of gaining a thorough Commercial High School - or even ordinary High School - education before seeking employment (subject, of course, to the above remark about the upper age limit).

The banks require usually some high school standing; one institution calls for Junior Matriculation, another for at least two years; a third has a more flexible standard, and will admit boys of especially good type

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Eleven Hundred - an estimate based upon the staff enrolment of two leading banks averaging approximately four male employees per branch office.

with Grade VIII. Pleasant manner and appearance, together with some indications of good upbringing and industrious habits, are what the manager looks for in the applicant. Two or three references - including one from the last teacher - are usually demanded.

On receiving an appointment, the boy is required to furnish the bond of his parent or guardian for \$2,000. to \$3,000. On reaching the age of twenty-one his own bond is accepted. This is actually an insurance against culpable negligence or dishonesty, so that the bank is immune from loss due to such causes.

The boy's first duties will depend upon the office into which he is appointed. In a country branch he may spend much of his time running across to other banks with deposited cheques of those banks prior to making the entry to the credit of the customer. He will also do considerable work in the supplementary cash books, and some of the routine correspondence. How much variety of experience he enjoys will depend upon how many clerks are sharing the work of the branch. Promotion cannot really be said to go by jobs; a teller in a large branch may be higher up the 'ladder' than an accountant in a smaller branch. A bank employee's status is determined rather by the salary to which experience and merit have raised him than by the duties he happens to be doing.

Initial pay is in most cases \$500.00 per year. Some leading banks provide living quarters at the smaller branches, and an equivalent allowance to level up living costs is made in other centres. On the information received from several banks the statement can be confidently made that

increments are regular and generous for boys who adapt themselves well to the work. There is no dead line of salary as in the Civil Service; a good man moves along to a busier bank, greater responsibility and better money as the opening occurs. The rate of such promotion varies with the general state of business. Normally eight years or so of good service will bring a boy to the financial status of a village school principal. Ten to fifteen years may bring him a small managership. Salaries for small town branch managers range upwards from about \$2,000. rising to \$3,000. or more in larger non-city branches. In larger city offices there are subordinate positions in accountancy, etc., which are quite as attractive as country managerships.

It is not every bank boy, however, who shows the ability or initiative necessary for continued promotion. If it becomes clear that he cannot reach a good living status, being only suited for the most routine duties, he is advised to find other employment more in his line while he is still young enough to learn. The banks discourage their employees from marrying on a marginal income, and they need a fair proportion of "footloose" young men to facilitate staff readjustments. The young man who cannot reach home-supporting status somewhere about twenty-six or twenty-seven does not usually stay in the work to that age.

Working hours are from 9 A. M. till the work is done, which is usually between four and five in the evening. "Rush days" occur from time to time, as when books are balanced, or in busy seasons such as harvest-time. On these days the staff works as late as 10 P. M. without additional pay.

Vacations are of two weeks duration if granted during the summer months, of three weeks' duration if deferred to the months of October to April; in either case with full pay.

On reaching the age of twenty-one all bank men are admitted, after favorable health examination, to the bank's Pension Fund, to which both employees and employers contribute. Most banks also co-operate in a Group Life Insurance scheme. In case of sickness the employee receives full pay for a reasonable period.

Application for bank employment should be made by personal interview with the banker nearest to your place of residence.

4. Life Insurance Selling.

(Based upon interviews with four Branch Superintendents in Edmonton.)

To state clearly the nature of Life Insurance work it is necessary first to remove any vagueness as to what the Agent has to sell. Three simple examples will suffice.

1. I sign a number of papers set before me by the Insurance Agent, make a first payment of \$125.00 and in a few days receive from the Company a document which I call my policy. Under the terms of this policy I shall make nineteen more annual payments of \$125.00. In return for the money paid I receive the satisfaction of knowing that:-

- (a) If I die, my next-of-kin will immediately be paid \$5,000.
- (b) If I am killed in any kind of accident incidental to civilized life, my next-of-kin will be paid \$10,000.
- (c) If by illness or other cause I am disabled from earning a living, I shall receive \$50.00 per month till recovery or death.
- (d) After three premiums have been paid, I can if necessary, borrow a considerable part of my payments to meet any emergency, without forfeiting the policy and its benefits.

II. I sign papers for a Ten Year Endowment policy and make a first payment of \$104.50. By the terms of the policy I must make nine more annual payments of like amount, and in return I have the satisfaction of knowing that:-

- (a) If I die, my next-of-kin will be paid \$1,000.
- (b) At the end of ten years I shall receive \$1,000. plus profits made by the Company amounting to (about) another \$200.00; sufficient to finance a trip to Europe or part-purchase of a home.

III. I sign papers for an Education Endowment policy for my son, aged two years, and make a first payment of \$50.00. By the terms of the policy I must make fifteen more payments of like amount, and in return I shall have the satisfaction of knowing that:-

- (a) At the age of eighteen, my son or I for him will receive \$250.00 to help pay for college or University training, and that this sum will be paid for him annually for four years.
- (b) If I die at any time during his childhood, the benefits will come to him without further payments just as if I had lived and paid in full.

Life Insurance is sold in many varying forms, but the above examples will be sufficient to illustrate the kinds of goods which the agent offers. Contrast his position for a moment with that of the car-salesman. He is not offering a beautiful machine for immediate use on easy payments. He is not offering something which the prospect's children will urge him to buy, or which will enable him to make week-end trips to the lake, or which will make a brave showing among his neighbors' cars. The Insurance man must induce his prospect to pay out money "with nothing to show for it", or in other words to put it into a bank from which he cannot draw (at least for three years). The average man does not for a moment believe that he is going to die young, or that he will fail to pile up a handsome account at the bank before old age comes. The Insurance man has to make him face these possibilities and take the precautions against them which an Insurance policy offers. The appeal,

in fact, is altogether different from that made by the auto or radio salesman, to say nothing of the stock salesman.

Insurance officials of the present day are emphatic and unanimous in declaring that they do not care to employ the overbearing "high pressure" salesman. Their ideal is a man whose appearance and manner inspire confidence and willingness to talk on the part of the prospect; one who can by reason and quiet explanation show the prospect how to protect his dependents from the risk of want or destitution; above all, will not "oversell" (that is, sell too expensive a policy for the client means) just for the sake of his own commission.

"What place is there for the High School graduate in the Insurance business?" was the major question asked of the four Superintendents. Their replies may be summarized thus:

In the Actuarial Department there are excellent and fast increasing opportunities for a young man of special mathematical ability. To enter the actuarial field he should graduate in Mathematics at the University, keeping closely in touch with the special requirements of the profession. "There are no unemployed Actuaries," was the consensus of opinion, and the salaries are very attractive.

In the offices there are few vacancies. Opinions of the officials differ as to the desirable type of recruit, but there are a few offices which accept and train High School graduates in the details of the business, with a view of launching them into field work after two or three years.

Field salesmanship is emphatically not recommended as a full-time vocation for boys under twenty-three or twenty-four years. They have not

the maturity, and their appearance does not inspire the confidence, which should accompany man-to-man talk about family responsibilities. In their own youthful circle they may perhaps make a few easy sales, but that circle is very limited and the policies sold are likely to be small. The general advice of the officials to would-be salesmen of eighteen or nineteen is: "Go and rub shoulders with the world for five years; if you are interested then, we will give you a chance."

The greater companies like the Prudential have a line of business of which little is generally known. For the benefit of the industrial wage-earning people they sell policies on which the premium is collected in monthly instalments by agents who call at the home. One company in Edmonton alone employs over twenty such agents. But the collection of the monthly instalments is only half their function. By establishing familiar and friendly acquaintance with the clients on their books they are able to canvass new prospects, and are expected to do so regularly.

CHAPTER VII

JOURNALISM AS A CAREER

Before you offer your services to the Newspaper Editor, there are several helpful things which you had better do first. Go right through High School making most of its opportunities, especially in Literature, History, Economics, Geography and Composition. The first will, if you give it a chance, show you how to express ideas, sentiments and facts in the style which, among a score of possible styles, is most appropriate. The second and third will give you a working knowledge of the foundations of the society whose doings you are going to record. The fourth will train you to put your story into readable form, and to make the fullest and most interesting use of it.

If you can possibly do so, take an Arts course at University, with some emphasis upon Literary and Economic studies. Some experience with the Varsity newspaper will be helpful if it gives you practice in putting together a good news item, in making brief but striking headings, in developing the "nose" for news, and in meeting and interviewing people.

Study newspapers as you would study a car, not from the cushioned back seat but with your head under the hood or your whole self under the chassis looking at the works from below. That is to say, view the newspaper as a concern which someone is making and keeping going from day to day. Examine the form of prominent articles; see how much of them is actual incident of the day, and how much is additional information gathered by some reporter who had to make that incident into as big and striking a story as

possible. Look over the front page and see which items would make good second column topics for the editorial page; or which items are likely to send the reporters running around for photographs. Compare the noon edition with the evening edition and see what changes have been made in the arrangement of news, and why.

Then go to the Editor. The chances of employment are not very good, for the city papers of Alberta engage only five or six "cub" reporters each in a year. If he does need a man, however, the Editor will be interested to know of your education and to discover evidences of initiative and poise. By poise we mean the ability to go into any society, good or bad, without looking or feeling an "outsider".

If you are eighteen years old or more and suitable, the Editor may give you employment, in which case you will begin as a cub reporter at about \$15.00 per week (\$20.00 per week if you are a university graduate). The reporter on an evening paper begins the day at 8.30 A. M. with a call at the office. There he looks in the Book, which contains the assignments given for the day to each reporter by the City Editor. For example, one reporter may be instructed to go to the police station or fire headquarters to get the news of any accidents, disorders or fire calls during the night; then to Mr. X. Y., a Vice-President of the C. P. R. who is at the Palliser Hotel, to get an interview with him; then to the Rotarian Luncheon; then to three leading automobile firms to ascertain the views of the proprietors about new import taxes announced by the Ottawa Government; finally to the School Board meeting at 8 P. M. If the City Editor

wishes to give him special instructions or explanations of his assignments, there will be a note or mark to that effect in the Book. The various items are routed, so that if necessary the reporter may be located and given new instructions. So the reporter goes out to get his news. He is largely at the mercy of chance; the important man whom he must interview may have gone for a drive; the police may be reticent about some case upon which a big story is required. During the day he may be told over the 'phone to get a photograph of Mrs. T., who is 107 years old today, and let the other jobs wait; or he may be sent off to the scene of a car smash. If he himself hears of something that should be written up at once, he must 'phone the office about it, or attend to it himself if delay would mean losing the story. Evening assignments fill about four nights a week, and involve chiefly plays, banquets, hockey games and other forms of entertainment or public business. The reporter must present his story fully written at the office before he goes home for the night. On other evenings his duties are finished when his assignment is complete in writing at the office - or as nearly complete as he can possibly make it. Any reporter or member of the editorial staff may be called at any hour of the night for important work.

A man who makes good as a reporter will ultimately turn into one of two higher branches of the work. If he is a literary artist, careful and clever in his use of words, he will find or make time to write short stories or descriptive articles for his paper and for national magazines. As he acquires skill and reputation along his line, he will in time become an

independent writer selling his work as he writes.

If, on the other hand, he is not so much a literary artist as a thoroughly good news man, he may rise into the executive work. The good news man is the one who has made many cordial acquaintances among the people who have the information to give. He is alert to see and hear anything of practical use to his paper. More than that, he has good judgment in seeing just what form should be given to a story, and what follow-up news may be made out of it. If a chief justice has a stroke, he will know that the fact calls for a paragraph at once, for subsequent reports of the judge's condition, convalescence or decline, perhaps for an obituary of his career and a description of the funeral, followed by rumors and later announcements as to his successor.

A reporter who is successful in such ways as these may be taken into the office at desk work under the City Editor, and later promoted to the position of night editor, sport editor or financial editor. The night editor has considerable responsibility, for he receives and writes up the night cables and decides what prominence they require; and he uses his judgment in calling up reporters for urgent night work.

Wages.- We have already seen that the initial wage of a reporter is about \$15.00 to \$20.00 per week, according to the nature of his equipment for the job. From that point he is paid what the management thinks he is worth. A man who is good enough to be retained at all will generally reach a modest home supporting status by the end of four years. Salaries in the

executive positions are decidedly attractive.

One thing the young reporter must be prepared for, and that is bald, unveiled criticism. His work is to get the news, get it now, get it right, and use it to the best advantage. If he fails to do this, no amount of self-excuse is likely to save him from rebuke. Competition among newspapers is intense; and news is not a thing that will do just as well in a day or two. Hence, it is the business of the management to keep the staff "keyed up" to the utmost keenness, and to let no omission or carelessness pass unnoticed. Criticism in these conditions should be considered not a personal attack but as part of the dynamics of the industry; and the reporter, deskman or section editor who receives a sharp reproof must take it and register a vow to make his best just a little better next time.

INDUSTRIAL VOCATIONS

1. The Baking Business

Bakeries, like other business concerns, vary in size from the one-man outfit selling a few dozen loaves daily over the counter, to the large modern plant employing a hundred hands and distributing its products over half the province. The following staff is typical of a good-sized bakery which distributes to stores in the city, and has a fairly extensive small-town custom. (The wages indicated are a composite of those paid by different firms which supplied information.)

<u>Occupation</u>	<u>Number</u>	<u>Weekly Wage</u>
Wrappers	1	\$10.00 to \$15.00
Shippers	2	\$15.00 to \$25.00
Wagon Drivers	12	\$24.00 and Commission
Bakers and Baker's Helpers	8	Union Wages [#]
Office Help	2	\$16.50
Stable Men	1	\$18.00
Route Man	1	\$30.00
City Traveller	<u>1</u>	—
	28	

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One firm states \$24.00, another states \$29.00 to \$40.00 ,
(according to responsibility.)

The Shippers handle materials such as flour coming in. They pack the cartons for delivery to the stores and for rail shipment to outside points. It is their business to see that the latter are entrained; and when shipments are completed they must balance the bread-sheets.

The baker's helpers fetch and carry materials under the baker's direction and attend to the dough-mixing and weighing machinery, in addition to bench work such as the preparation and return of pans, turning out of loaves, etc.

The baker is the scientist of the business. He knows the characteristics and action of every kind of flour he handles, the right proportions of ingredients for white, whole-wheat, raisin and other varieties of bread or rolls. He controls the temperature conditions for the other varieties of bread or rolls. He controls the temperature conditions for the various stages of the dough, and the timing of the processes. He regulates the oven temperatures and times the baking, for the various products.

The wrapper tends the wrapping machine and sets the wrapped loaves on the racks ready for the shippers. He also helps the shippers with the packing work. There is not much more than a 'blind alley job' to this work according to one employer.

The wagon drivers deliver bread, pastries, etc., to domestic customers, and collect payments, along their assigned routes. They are expected to maintain courteous and satisfactory relations with their customers, to push the sale of pastries and other lines, and to show initiative in obtaining new business. (Additional commission encourages this.) They are also responsible for the smart appearance and regular greasing of their wagon. They begin their rounds commonly at 7.30 A. M. and average nine to ten hours work per week day.

The route man is general supervisor of deliveries; he keeps the wagon men "on their toes", looks out for possible extension of custom and makes adjustments in routes where necessary .

Boys sixteen or over may be received into the bakery as wrappers or baker's helpers. Prospects with a good firm are satisfactory for a good

helper. Two employers report that they send promising boys down to the Trent Baking Institute, Guelph, Ontario for a six months' course with fees and salary paid, in order to give them expert training; but the occasion for doing so does not often arise, as the skilled baker generally stays with his job.

With a widely operating firm the wagon man has his chances. His experience in meeting the public and his knowledge of domestic requirements frequently qualify him for travelling salesmanship and even executive duties. "Our last three plant Superintendents", said one employer, "came off the wagon."

For information on the small-town bakery business see the chapter, "Skilled Trade in the Towns and Villages."

2. City Dairy Businesses

What sort of organisation stands behind the neatly-capped bottle of ice-cold milk which stands out on your door-step every morning? The following staff, fairly typical of a good-sized dairy, will serve as a starting point for a brief description.

Office Staff:

- 1 head man,
- 2 male clerks,
- 4 women clerks,
- 1 checker.

Plant Staff:

Pasteurizing: 1 machine man	1 department head
1 assistant	

Plant Staff (continued)

Bottling: 1 machine man
1 assistant

Bottle Washing: 1 machine man
1 assistant

Buttermaking: 1 machine man 1 department head
2 assistants

Distributing Staff:
25 wagon men 1 department head
3 van men

Stable Staff:
3 stable men
1 foreman

Engineers:
1 day man
1 night man.

Of the office staff nothing need be said. The ordinary training of a business college and a little experience on the job are all the qualifications required for the subordinate duties, and the wages range from \$80.00 to \$100.00 per month, for the male clerks. In smaller firms where they have to take a hand in year duties such as loading, pay is somewhat higher.

The machine man in each of the plant operations is required to know his machine thoroughly and to keep it running efficiently. Under his orders, the assistant must keep everything clean and wholesome about the machine and room. Naturally he has good opportunities of learning the machine man's job.

The distributing department employs the bulk of the male labor and offers most of the vacancies. The wagon man drives his wagon up to

the loading chute or platform between four and five o'clock in the morning, loads his wagon and drives off on his round. In addition to leaving the milk for his customers he has, of course, to sell tickets of various kinds - for pints and quarts, for ordinary and special milk and for cream. He must use his good judgment when the customer forgets to put out a ticket; he must be obliging without failing to collect his money. When a customer moves, he must try to obtain her next address, and he must be alert to secure new customers on his round. Where he supplies a rooming house with several customers, he may need considerable tact to iron out little difficulties.

The van men make deliveries of larger orders of milk, cream and butter to restaurants and hotels.

The following statement of monthly wages is a composite of the statements placed at our disposal by four leading city firms:

Office Head Men	\$150.00 per month.	Department Heads	\$137.50 to \$200.00
Clerks	\$30.00 to \$150.00		
Pasteuriser - Man in charge	\$120.	Assistant	\$85. to \$105.
Bottler	" " " \$100. to \$120.	Assistant	\$85. to \$105.
Washer	" " " \$ 90. " \$110.	Assistant	\$85. " \$105.
Buttermaking	" " " \$135. " \$175.	Assistant	\$85. " \$110.
Ice Cream Making	" " \$140.	Assistant	\$85. " \$105.
Stable Men	" " \$130.	Assistants	\$100. to \$110.
Wagon men (Wages and commission average)	\$125.00		
Van or Truck man	\$100. to \$125.		

3. The Meat Packing Industry.

Alberta has five Meat Packing plants with payrolls between One Hundred and Fifty and Four Hundred employees strong. About ninety

percent of the workers are men and boys (aged sixteen and upwards).

Some idea of the work may best be gained by a visit to such parts of a packing plant as a visitor is at liberty to see. You are taken first to a slaughtering-floor at the top of the plant. From the closed-in abattoir a decapitated steer, suspended by the hind legs to an overhead rail, is pushed on to the scene. The animal is laid out on the floor and skinned by two experts with knives; placed on the rail again and dressed, cut in halves and pushed along the rails to the lift, by which it is transferred to the lower floors for inspection, chilling and the other preparations for marketing. Meanwhile on the top floor the various by-products have been sorted out. One man is skinning the head, and presently throws it down a runway along which it slides to the next floor. The stomach goes down another runway to the tripe bench, heart and liver down to other benches, the offal down to the fertiliser plant. The hide is rolled and dispatched down another runway for drying, storing and dispatch to the big tanneries in the East. Another man is incessantly busy with a water-hose, and keeps the floor clean. (The men are all equipped with high rubber boots and leather aprons.)

On the floor below we see men trimming the tripes, liver and heads. This one is cutting out and stacking the tongues; another is removing good meat from the jawbones and stacking them up; another is keeping the benches clear of trimmings.

These are the most forbidding departments of the plant, and (according to the managers) employ the rougher type of labor. Rough or

not, the men are skilful in their work. It should be stated with emphasis that the working conditions are surprisingly wholesome, with good light, ample ventilation and no foul smells.

Over in another department you may see sides of pork come down the runways to the benches. With the neatest strokes, the workers cut them into ham, shoulder, side and ribs, throwing each part a different way. More workers with knives trim the cuts into shape and toss them down more runways leading to cooking, curing, rolling, wrapping or packing departments. All this is a handling of clean, attractive-looking meat.

Enough has been said to give a fair glimpse of the typical activities of a packing plant. In the interests of health, satisfied labor and good wholesome products - as well as in compliance with legal standards for factories, - the plants are kept about as pleasant to work in as they possibly can be.

Boys are admitted at sixteen for work in the Parvelling and Boxing departments. The best opportunities are available for those who are willing to go into the butchering end of the business and "learn their meat". Two managers interviewed by the writer emphasized this fact, making it clear that the most responsible and lucrative jobs are simply not to be reached without first-hand experience of the product in its various stages. The opportunities are good because the brain competition is small. The more education the better, provided you haven't too fine a stomach.

A considerable staff of travelling representatives is employed. This is stated to be a very desirable job, with good remuneration. The

products - meats, lard, shortening, butter, sausages, etc., - are staple goods for which there is always a demand. The policy of the firms consulted is to keep these positions as much as possible for their own factory employees, rather than hire travellers from other lines of business.

There are also a few Buyers, picked men capable of shouldering responsibility and doing shrewd business in the market and the countryside. Promotion throughout the plants is by choice of the suitable man, and it is estimated that a boy of good ability and attitude can reach the higher staff in from five to ten years, depending upon the "times" - good or bad.

The hazards of the industry are slight. There are frequent minor casualties such as cut fingers, and medical services are provided for these in compliance with government regulations.

Application for employment should be made in person, not by 'phone or through the mail, at the office of the plant manager.

4. The Tanning Industry.

A province which sells in the stockyards annually some 850,000 head of livestock might reasonably be supposed to have, in their hides, the basis of an important TANNING industry. There is, however, virtually

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Based on Interview with the Proprietor of the Edmonton Tannery.

no tanning industry in Alberta. There are in Edmonton three, in Calgary two, and at other points a scattered few, small plants describing themselves as "custom tanners". These receive hides and pelts from individual farmers or other persons, and make them up into rugs or whatever is required. At times of depression such as the present (1931) these plants employ only two to six men, and at the busiest times no more than a dozen. Practically the entire hide output of the packing houses is sent to the East. (Canada or United States.)

Attempts which have been made to bring the tanning industry close to the source of raw material have hitherto failed for a number of reasons, including the following:

(1) The leather manufacturers are in the East, where different lines and styles of leather goods can be made wholesale and readily disposed of. A Western manufacturer of such universally consumed articles as shoes cannot compete with the Eastern firm because he cannot economically make the numerous styles of footwear which the public demands.

(2) The cost of shipping in the chemical materials for tanning has placed the Western tanner at a disadvantage.

(3) A tannery supplying a specialised leather-goods manufactory (such as harness and saddle makers) has to select its hides and so pay more than the large Eastern tannery which takes whatever comes. Even in the attenuated form in which it exists in Alberta, the "custom" tanning industry is passing through difficult times. The passing of the farm

buggy has almost killed the demand for windproof robes; and the increase of power machinery has greatly reduced the demand for harnesses - a condition aggravated by the resulting trade in secondhand harness.

Conclusion.- The tanning trade is not, and offers no early prospect of becoming, a significant field of employment for the youth of Alberta.

5. Flour Milling

The impression remaining with the writer, after visiting two city flour mills, is of a most intricate maze of machinery, elevators, feed-pipes and belts, rising to four or five stories, with hardly a man to be seen. The largest plant in the Province employs about One Hundred and Twenty men in three shifts; at the busiest hours of the day one will only find, in the unloading, cleaning, mixing, milling, bagging and loading operations, about forty-five men distributed over a huge building. There are only two or three mills on this scale in Alberta, and about three others employing forty to sixty men each. In addition, there are a score or more of fully equipped plants normally employing staffs of eight to twelve men; and ^{some} 90 small town custom mills run by the proprietors with one or two helpers. Of the last group it is not possible to make any general statements here, and reference to the larger mills will be brief because they represent a very small occupational field with only occasional openings for men, and none for boys under eighteen.

Labor Distribution in a Large Mill.- After passing the Government Inspector and Weigher, the car of wheat is unloaded by two men into the "pit", from which a belt with attached buckets raises it to the top of the mill elevator. Here a staff of four men under a foreman direct the grain into various bins according to its grade and condition, blend various grades into a suitable milling mixture, pass it through a process of weed-seed eradication, and on through the Scourers which scrub off the surface of the 'berries' to remove dirt. In the same department the wheat is tempered by a mild heating process to bring it into a perfect breaking condition.

It is then passed through mechanical conveyors into the mill proper, where it is broken, sifted, rolled, bolted and purified until it is divided into seemingly innumerable streams of 'Midlings' of different baking value. In charge of these operations there are a Head Miller, a Second Miller, a Grinder, a Bolter, and a Millwright. The last-named is the mechanical expert of the plant, and must be on hand wherever 'choking' or other trouble occurs. Three Oilers, four or five Sweepers (who keep the plant tidy) and two utility men are also busy at their respective jobs in the milling department.

The various streams of middlings are tested frequently by the Chemist to ascertain their baking characteristics. He tabulates his findings and makes his recommendations to the Head Miller, who then decides how the streams shall be blended to make the various commercial grades of flour,

from the first to the fifth.

The finished products - flour of various grades, bran, shorts, etc., are passed down large funnels into the bags held by the packers. The funnels close automatically as a certain weight is pressed into the bag. The packer checks the bag on the scale, throwing in the few ounces needed to make full weight, and then moves it along to the stitching machine where it is sewn up as it passes along a little rolling platform. Another short lift sets it on the revolving carrier which transfers it to the warehouse. In the mill we are describing there are twelve packers.

In the warehouse some ten or twelve men are busy as Pilers, Truckers, or Car Loaders, working under the orders of the Warehouse Foreman.

The Milling Trade calls for men of strong physique. For this reason, and because of the careful movement required among so much belted and chained mechanism, boys under eighteen are not employed. In mills of small capacity and staff, much of the work is less specialised; that is, one man may have to cover more different jobs than in a large plant.

6. The Printing Trade.

The following information was obtained by interview with one of the leading firms in the province.

Definition.- A printing business contains three main departments; the employees of which are respectively Compositors, Pressmen and Binders; these form distinct trades, the first-named employing the most workers.

The Compositor has charge of a printing "job" up to the point where the type has been set and locked tightly in its frame and is ready to be put in the press. A good compositor is able to set up a poster, given the essential facts; to set up a page of attractive advertisements in which all the individual jobs have due prominence; to read and reproduce manuscript accurately and rapidly in type without lapsing into meaningless or ludicrous blunders; and to put bad or illiterate manuscript into presentable English.

The Pressman takes the finished form from the compositor and, except, where binding is required, completes the job. He must know how to level the surface of the type so as to obtain a perfectly even impression; he must be able to manipulate the presses for the newspaper, poster and ticket work; he must be a competent press mechanic.

The Binder completes the book jobs. This is mainly a female occupation and so outside the scope of this work.

Working Conditions.- Printing is as healthful as the general run of indoor jobs. Machinery hazards are light, but care and attentiveness are necessary. There is ample scope for pride of workmanship, for there are many fine points in the product of attainment of which gives great satisfaction to the craftsman and to the customer. Working time is forty-four hours a week as a general rule all over the continent. The Typographical Union wage scale is \$44.00 per week for the journeyman (ordinary skilled worker), with greater increments to particularly

desirable men.

Admission and Promotion.- Owing to good wages and protective union measures, the leakage of skilled labor from the printing trade is very small, and admission of apprentices therefore infrequent. It is estimated that in Edmonton the trade has taken on about twenty apprentices over a four-year period. Not more than one such to each four men is given training at any time. A keen boy may get in line for apprenticeship by serving as 'odd-jobber' for a year or two but there is no ruling about this.

The apprentice compositor starts at \$11.00 a week with a \$1.00 raise at end of each half year till end of third year. Then he rises to half the journeyman scale, and begins his fifth year at two thirds of the said scale. His apprenticeship is complete after four and one-half years. The would-be apprenticeship should have Grade X standing, and a good mastery of English is essential. His first four years will be devoted to all-round mastery of compositing, and the final half year to learning the linotype machine.

The pressroom beginner is known as a "Feeder" - that is, his job at the machine. His pay runs like that of the apprentice compositor till end of three years when he rises to \$20.00. He goes on at that rate until there is a vacancy for an apprentice-pressman, which occurs in a good-sized firm once in four years. He works as apprentice for two years and thereafter received full union wages.

Both these classes of apprentices are required under the rules of the Typographical Union to complete specified evening courses, this requirement being rigidly enforced as a condition of promotion. Thus the boy has clearly marked avenues of self-improvement and a chance to show his calibre. Our informant stressed the fact that there is a dearth of men who are willing to acquire a sound knowledge of all three departments of the trade, and good prospects for the man who has ambition and patience enough to do so.

(The above paragraph has equal reference to the Job and Newspaper branches of the trade.)

Provision for old age.- The Pressmen's and Typographical Unions have contributory annuity and pension schemes to which most of the provident workmen belong. The age of a man's retirement from the work depends upon his employability and upon the nature of his provision for old age. There is nothing inherent in the occupation that would make for premature incapacity or shortened life.

We have here made no reference to the small-town printing business, about which it is impossible to generalize. There a boy may serve his apprenticeship by helping his father and "tinkering around" until he can fill an order or set up a paper. The small town printer may make a good living or none at all, according to the prices he can "get away with", the amount of competition, his ability as an editor, his willingness to work at all hours, and numerous other factors which we cannot usefully

tabulate. This much may be said, however, that a young man who takes over and establishes a small-town press can have no better preparation than the training obtained in a regular apprenticeship with the evening courses fully exploited.

CHAPTER IX

SKILLED TRADES IN THE TOWNS AND VILLAGES

The reader who has thus far conned these pages must have remarked that the cities appear to be holding a monopoly of vocational opportunity in the field of trade and industry; and he may have asked somewhat impatiently; "Are there no openings outside of the cities?" In the attempt to obtain an answer to that question a questionnaire was sent to fifty commissioners or secretaries of towns and villages over the length and breadth of the province. The following occupations were named:

Baker and Confectioner	Shoemaker and Repairer
Blacksmith	Tailor (Make, clean or repair clothing.)
Cabinet Maker	Carpenter
Electricien (for house wiring, repairs, etc.)	Any other skilled labor needed in your district.
Harness Maker and Repairer	
Interior Decorator	

These questions were asked with respect to the above trades in each of fifty centres:

1. Is there one in your town?
2. If not, could your district support one?
3. What annual income could he make?

The last question was asked, not in the expectation of obtaining significant information, but in the hope of inducing a little greater reflection upon the answer to the second question.

Of the fifty questionnaires sent out, forty-two were returned. Practically all gave a numerical statement in answer to Question 1, the remainder giving only a general statement such as "We have all the skilled

labor we require." Practically all gave some answers to Question 2, indicating a very general state of saturation in the small town skilled trades. In some cases this unfavorable report is sustained by reference to businesses vacated through lack of work or custom. (See Table 3, "Moved Away" column.) There was no significant answers to Question 3.

Assuming the sampling to have been a fair and adequately large one, we may conclude from the following table that there is at present very little opportunity indeed in the field of occupation here considered. Columns 5, 6 and 8, reflecting unfavorable conditions, overwhelm the very slender evidence of opportunity in column 7. While the present general business depression (1930-31) may be justly said to have influenced the returns, it should be noted that the compilers of those returns were town and village secretaries, men qualified by their calling to take a longer view than the man in the street; that they were expressly urged to give their information having in mind the future placing of our young people; and that many of the returns show very clear evidence of judgment based upon long familiarity with the district.

If we accept this table as proof that the listed trades are more than filled in the smaller centres, column 1 (especially in combination with column 2) gains significance. We discover, for example, that nearly 70% of small centres do not offer a living to a Cabinet Maker, that over 40% of them do not offer a living to a Tailor, and that over 20% do not offer a living to a Baker or a Decorator.

Combining 1 and 2, we may say that there is:

No room for competition between Bakers in 80% of towns and villages.
No room for competition between Blacksmiths in 40% of the towns and villages.

TABLE IV

Skilled Trades in the Southern Counties of Alberta.

	1	2	3	4	5	6	7	8
Occupation	Towns and Villages supporting (more than)				T. and V. complaining "Too Many"	T. and V. suffering City Competition	Opening Possible	"Moved Away."
	0	1	2	2				
Baker and								
Confectioner	9	26	4	3	1	2	2	1
Blacksmith	2	16	22	2	3			1
Cabinet Maker	29	12	1				1 part-time	1
Electrician (for house-wiring, repair, etc.)	8	20	9	5				
Turnsmithmaker & Repairer	7	30	5	1				4
Interior Decorator	9	16	8	9	1			1
Shoemaker & Repairer	2	25	11	4	1			1
Tailor (make clean or repair clothing.)	18	16	6	2		5	1	6
Carpenter (for house alteration etc.)	14	4	19		2			

Any other class of skilled labor needed in your district? One town in the North country recorded a need for the following:

Flour Miller (with adequate capital)

Dentist (resident, not visiting)

Brick and Lumber Building Contractor.

Another town (S. E. Alberta) suggests that an auto-body repairer might be well there.

No room for competition between Cabinet Makers in 25% of towns and villages.
No room for competition between Electricians in 60% of towns and villages.
No room for competition between Harnessmakers in 85% of towns and villages.
No room for competition between Decorators in 60% of towns and villages.
No room for competition between Shoemakers in 60% of towns and villages.
No room for competition between Tailors in 80% of towns and villages.
No room for competition between Carpenters in 30% of towns and villages.

These percentages, while very limited in meaning and dubious in accuracy, do present a very necessary warning, viz. that the utmost discretion is necessary in choosing a location for any business along the lines above-listed, even in centres where the prospect of competition is little or nil.

Upon the several trades some brief comments may here be made. The expansion of city bakeries and the efficient distribution of their goods by truck and rail, have already proved a serious menace to small town business. The goods require no skill in sale, but may be handled by the package or dozen along with any other general store merchandise. Blacksmithing also shows evidence of decline, due partly to the use of heavy tractor machinery and partly to the use of trucks in place of teams for the winter grain hauling. The loss in horseshoe work from this cause has in the aggregate been enormous. The harnessmaker has suffered heavily from the same developments, and from the virtual disappearance of the buggy. Interior decoration has become, largely through the exigencies of the pioneer life, a domestic skill in all but the wealthiest homes. The introduction of new and beautiful forms of plaster finishing, color-blending, etc., is however likely to result in a distinct revival of interior decorating as a skilled trade, for which real training will be

necessary and substantial wages demanded. Tailoring has gone the way of many other trades - into mass production. Outside of the cities there are now very few tailors who "build" a suit of clothes; those who make a living do so largely by selling ready made goods with the slight alterations required by the individual buyer, and by cleaning, pressing or repairing clothes. The same trend towards mass-production has stolen from the shoemaker his major craft, and left him a shoe-repairer. Carpentry, like interior decoration, has become everybody's job. Frequent expressions such as "plenty", "four or five experts and numerous botchers", "several", "several part time", occurring in the questionnaires, indicate that rural Alberta is not yet ready to absorb new supplies of trained carpenters. The day of enormous railway contracts for depot-building is past, and the crop of carpenters it produced is still with us. The demands of the future will for the most part be moderate and fairly steady, concerned with the erection of dwelling houses to replace the primitive buildings of the young West. The requirements of this replacement work are going to be much more stringent than in the past. A carpenter will have to be an artist in his line to meet those requirements.

The case of the electrician is decidedly different. Within the last few years Alberta has been covered with power lines which now supply a large number of the rural centres. The developments in immediate prospect are twofold; there will be a steady filling-in and extension of the power lines along the rail-routes; and there will be a powerful, ultimately successful clamor for the power facilities to be made available at fair

cost to the farm homes. The wiring of buildings, the introduction and sale of electrical implements, will open a field of employment which as yet hardly exists.

With that exception noted, it is safe to advise a boy to enter the above-listed occupations only when he has a definite job in prospect or when the formation of new settlements indicates a strong demand for special skilled labor. If he enters the general competitive field, expecting to get a start somewhere, somehow, he will find the odds heavily against him.

CHAPTER X

ENGINEERING

1. Chemical Engineering.

The Chemical Engineer is concerned in the construction and operation of industrial plants which make use of complex chemical processes. In the smelting of metals he is required because of his knowledge of the breaking down and re-combing of elements which release the metal from the ore, and of the nature and management of combustion. In the wood-pulp and paper business he is needed to supervise the processes by which the wood-fibre is digested and made cohesive. In the great coal-fields he is found at work in the coking plants, experimenting with the various gases and oils which are driven by heat out of the coal, finding new by-products or devising more economical ways of securing the known ones. In the great tanning yards, in the breweries, in the packing plants, in the oil fields and many other scenes of industrial life the chemical engineer is an indispensable man.

The status of professional engineer (whether in the civil, electrical, chemical or mining sphere) can be attained either by eight years of practical experience and the passing of stiff examinations; or by graduation in the University Engineering Department followed by two years of practical experience. Of the former alternative little can be said, since the opportunities for acquiring adequate experience as a plant workman are, up to the present, quite limited in Alberta. The latter alternative offers

a training designed by experts in the engineering field to familiarise the student with the theory and industrial applications of the science as now required, and likely to be required, in the development of Western Canada.

Engineering courses at the University of Alberta lead to the B. Sc. degree. To enter the department the student must have matriculated in the following courses:

Composition 1, 2 and 3,	Literature 1, 2 and 3.
Algebra 1 and 2,	Geometry 1 and 2,
Arithmetic 1,	Physics 1.
Units 1 and 2 of Latin <u>or</u>	History 1, 2 and 3,
Greek <u>or</u> French <u>or</u> German.	General Science 1,

Three other courses from: Chemistry 1, Geography 1, Agriculture 1, Art, 1, Languages, Shop Work, and Manual Training.

Five years are then required to graduate. The first is devoted to general Arts-Science studies, the other four to specific engineering subjects. The first year may be completed in High School by passing the following units:

Composition 4, Literature 4, Algebra 3, Geometry 3, Trigonometry 1, Physics 2, third course in a language, and either History 4 or Biology 1.

The above statement of Matriculation and First Year requirements applies to all Engineering courses, Civil, Electrical, Chemical and Mining.

The graduate in Chemical Engineering will usually find *his* way into

the control laboratory of an industrial plant such as we have already enumerated. His work here is generally of two kinds; firstly, making chemical analyses of the product to see that it is up to standard, and secondly, (if it is below standard) finding out what is wrong, whether chemically or mechanically, with the works.

From the control laboratory his career opens out into executive or research work. If his abilities lead towards labor control, he may become foreman and later superintendent of a department, possibly rising to the general superintendency and ultimately to a place on the directorate. On the research side is found the man whose interest lies in developing new by-products, that is, in finding commercial uses for substances which are going up the smoke stack or out on the dump as waste. Not only must he make his "find" at the laboratory bench, but he must design a small "semi-commercial" plant which will prove that his new process can be carried on economically. This is well illustrated in the case of our much-advertised bituminous sands. Wonderful things can be done with it at the bench; but it is such messy, glutinous stuff that the expense of labor to move it on a commercial scale is almost prohibitive. The chemical engineer has that problem to solve.

The field for the chemical engineer in Alberta is not yet fully opened; indeed, it is misleading to speak of the "Alberta field", since there are no provincial boundaries to industry, and the engineer who becomes associated with a big firm may find himself moving with opportunity and promotion across

the continent and back again. But the industrial growth of the West, according to well-informed observers, lies in the near future, and the prospects of the practical scientist are decidedly good.

2. Civil Engineering.

In the profession of Civil Engineering we find mathematical (and in a less degree other sciences) applied to the designing and construction of buildings and utilities of various kinds. The following branches are typical.

Transportation Utilities, including highways, motorways, railways and airports. The civil engineer understands the principles of road-building for different purposes; the selection of economical routes involving the least removal of earth; the estimation of yardage in construction work; the various methods of bridging, etc.

Hydraulics, including water power, irrigation, drainage, community water and sewage systems. The civil engineer is the expert in charge of the laying down of systems for the domestic and agricultural distribution of water, for the running-off and disposal of water from streets and low-lying lands, and for the sanitary disposal of sewage. It requires very little reflection to realise that a great amount of technical knowledge, experience and practical skill are required, for example, in the lifting and piping of water at the right pressure from the Saskatchewan River to the thousands of homes in the city of Edmonton.

Surveying, including town-planning, laying-out of traffic arteries in cities, and such surveying as is required in roadwork, irrigation, etc.

Structural Engineering, Before a great building, bridge, dam or other structure can be erected, a great deal of mathematical work must be done to ensure that the materials used will stand the strains and stresses to which they are to be subjected. A typical problem for the engineer in this branch would be the designing of a large covered hockey rink without any interior supports for the roof. He would have to exercise great ingenuity to ensure that the rafters and beams rested on ^{the} walls without thrusting them outwards or sagging at the middle.

Training for Civil Engineering.- Entrance to the professional field is practically exclusively through the Universities. The general plan of the course at the University of Alberta is the same as that of the Chemical Engineering course. (See page 92.)

3. Electrical Engineering.

The vocational field afforded by the application of electricity is a very wide and attractive one. We are familiar already with Electric Railways, power and light systems, telephones, telegraphs, household and farm appliances, smokeless factories, radio and many other uses of the invisible power. Almost every month some new device comes through to us from the East, whereby we can toast our bread, clean our carpets, keep the time or play the gramophone a little more conveniently than before. The electrical age is well begun, and there is no reason to doubt that the unfolding of its potentialities will continue to be as wonderful and various during the next half-century as during the past.

The electrical engineer is the controlling genius of this power. He has to understand it in every phase.

I. He is familiar with hydro-electric production, the construction and control of power dams, turbine and dynamo.

II. He knows how electricity is transmitted; the conductivity or resistance of different metals; the combination of weight, conductivity and diameter which determines the suitability of a wire for a given power-load; the intricacy of transformers, circuits, etc.

III. He understands the mechanisms by which the power is exerted at the place of use, and the various controls and safeguards necessary in use and installation; and he knows what plant and power are required to run a particular job.

We cannot attempt to exhaust the list of his accomplishments. In each of the more obvious departments - Production, Transmission, Application, there is a great body of theoretical science and practical skill, the nature of which a high school boy can readily infer for himself.

Here again, we can give no specific statement about opportunities in Alberta. The Alberta engineering graduate has the Dominion for his field. Usually, up to the present, he has stepped from the University right into the employ of the General Electric, Northern Electric or Westinghouse Company, where he spends about eighteen months in various departments and in the office as student engineer before admission to the professional staff. Then he is one of a national staff, and may or may not come back to his native prairie. (If he does not, someone else will, so

Alberta is not a loser!) His service with such companies may be along one of several lines. He may be in charge of the operation of a plant or department. He may be a salesman of power machinery, or he may be entrusted with the installation of such machinery for the Company's customers. Or again, he may be employed in designing machinery suitable for introduction into a hitherto not-electrified industrial process, or in devising novel applications to domestic needs. (Somebody 'thought out' the electric iron and the electric clock; they did not just happen.) Or again, he may show special aptitude for the administrative work of the Company and find his way into the executive staff.

Returning to Alberta as a field for the electrical engineer, there is no evidence of any early scramble for experts within the province. True, the various power-sites will be developed in due course, but one expert goes a long way in engineering, and the retail of power and light will employ far more good electrical tradesmen than professional men. In the fairly remote future it may be found profitable to transmit the heat and power inherent in our coal supplies, in the form of electrical current from steam-driven dynamos. More immediate is the prospect that the notorious waste of natural gas in the Turner Valley Field will be overcome in that way. Already (March 1931) tentative proposals have been made by capitalists to the Provincial Government with this project in view.

Such is the general outlook for electrical engineering. By reason of its convenience, and elimination of drudgery, its transportability, its

cleanliness, its superior safety with respect to fire hazards, and many other advantages, electricity is destined to serve in greater and greater measure man's needs of heat, light and power. The demand for experts will increase greatly. Competition which is already keen will increase also; but the prospects are highly favorable for the well-trained and capable professional engineer in this field.

Training.- The requirements and general plan of the University course are similar to those in Chemical Engineering. (See page 92.)

Note on Electrical Trades.- For those who have not sufficient academic aptitude or financial backing to attend University, but wish to become skilled electricians, the courses offered by the Calgary Institute of Technology should be of interest. There a two year course is offered comprising the Physics, Mathematics, Chemistry, Drafting and the general theory of Electricity, together with a rich programme of shop and machine work in the splendidly equipped shops of the Institute. A serious-minded boy will find much to attract him in the Calendar of the Institute, which may be obtained by writing to the Principal, Dr. W. G. Carpenter. Boys of Edmonton and Calgary should also familiarise themselves with the training offered at the city Technical Schools.

4. Mining Engineering.

The closing paragraph of the section on Chemical Engineering applies here. A man who specialises in Mining Engineering is likely to become connected with a firm having wide-spread interests, and if he has good ability

he may find the future openings for him in some part of the world that he never expected to see. In Alberta itself opportunities are limited, and likely to be so for some years. Careful survey of our little corner of the Canadian Shield does not justify the hope of great mining developments there. The bituminous sands of the Athabasca are a dubious commodity, remote from markets and hard to handle. Some salt mining may be expected in that region. The coal industry in our major fields is severely handicapped by long haul to the Eastern consumer in the teeth of United States' competition, and by the cheaper local coals and natural gas which supply our own people.

Nevertheless, we have our place in the larger life of the Dominion, and there are opportunities East and West of us for which Alberta boys may well prepare themselves. The demand of our age is for more and more metals. The output of pig iron, zinc, copper and lead has more than trebled in the last forty years, while that of aluminum has grown from nothing to around 200,000 metric tons per annum. The rise of the petroleum industry hardly needs mention; it is estimated that "British companies, closely connected with the British government, are now in exclusive possession of ninety to ninety-seven percent of the world's future production[#]"; hence there is within the Empire a great field for the oil-mining expert.

Metal mining is steadily acquiring the characteristics of a factory industry. With the extinction of rich lodes, it is more and more a matter of devising processes by which metals can be extracted profitably from low-

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"The World Struggle for Oil", P. la Tramerie, 1924.

grade ores, gravels and dirt. "In California fruit orchards in valleys were bought up, the trees and soil removed, all the (subsoil) gravels were passed through the digestive tract of the great dredges, and spread out evenly behind. Then the original soil was spread out on top, fruit trees were planted, and the de-aureated earth.... was returned forever to the Kingdom of Ceres." # This remarkable incident of the California gold era well illustrates the modern trend in metal-mining.

For a statement as to requirements and duration of the Mining course at the University of Alberta, see "Chemical Engineering". The Mining course is somewhat wider in scope than the other Engineering courses, and includes a good grounding in Geology, designed to turn out a graduate who is a useful combination of prospector and engineer. Owing to the prohibitive cost of equipment, the University does not give instruction in Oil-Mining.

5. Mechanical Engineering.

There is no separate Department of Mechanical Engineering at the University of Alberta, but the elements of the subject are included in the other departments. The Provincial School of Technology and Arts, Calgary gives a two-year course in Industrial Mechanical Engineering with a large and varied programme of practical work as well as theory. The subjects listed in the current (1930-31) handbook of the Institute include the following: Power Plant, Repair Shop, Machine Shop, Electrical Shop, Steam

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"The Evolution of Mining", J. E. Spurr, in the Engineering and Mining Journal-Press, Jan. 3, 1925.

Theory, Mechanical Testing, Drafting, Mathematics, Physics, Chemistry and English. It may be noted here that there are no hard and fast academic requirements for admission to the Institute (though the Staff may withhold admission from applicants who evidently cannot meet the standards of work set for the classes.) This makes the Institute a special opportunity for those boys and girls who have good general ability but are not qualified to enter University.

With respect to the prospects for mechanical engineers during the coming development of Alberta, we cannot do better than quote the words of the handbook of the Institute, which may be regarded as authoritative:

"Great strides have been made in reducing the cost of steam plant during recent years and many modern (steam) plants are now successfully competing with Hydro.

The plant requiring both power and heat for its process can generally produce them in combination at a total cost lower than purchased power, with steam generated at a low pressure.

With the wonderful stores of gas, oil and coal known to exist in this Province, the steam plant will again come into its own and the steam engineer of only a few years hence who has prepared himself in youth for that day by taking such a course as this will then be an aristocrat of the industrial life of the Province."

Note on Engineering in General.

Underlying the whole structure of modern civilization, quickening its growth, energising and often directing its movements, there is one tremendous force. Apparently sleeping during many centuries of man's history, it awoke with startling suddenness in the Eighteenth Century and took over the control of human affairs. That force is Applied Science. Already it has girdled the

earth with railroads, steamer routes, cables, telegraphs, telephones, radio stations, postal service and many other utilities. What it has achieved may be hardly more than a basis for its future developments, providing it with instruments for bringing forth greater wonders than it has dreamed of yet.

Applied Science is the field of the engineer. The boy who enters it with good abilities and healthy ambition can hardly be wrong in his choice; all the omens of modern history are in his favor. Even if he never practises engineering, he acquires a technique of thought and organisation and analysis which make every phase of modern life more intelligible and more subject to his control. It has been said that a successful student of Applied Science can turn his training into excellent use even in a Cigar Store!

However sombre the outlook may appear to be for Western Canada during the 1931 wheat debacle, there is a factor which cannot be overlooked. The world's population has been bulging and bursting the frontiers of settlement for the last century. That is a movement which immigration laws and bad times may curb but cannot check. Western Canada is the most habitable and least populous area now available, and the next surge of population is more than likely to come this way. There are busy days ahead for the statesmen, but busier days still for the engineers. Many developments which are impossible with our sparse population will become practicable and imperative in perhaps a few years' time.

CHAPTER XI

CONCLUSION

The preceding pages embody what the writer has learned by conversation and correspondence with more than sixty leaders in business and professional life. In the course of this incursion into fields hitherto quite unfamiliar, a few general conclusions have been drawn which seem to merit expression, not as the unsupported moralising of a man prone to preaching, but as facts reiterated again and again by men of the world.

I. The West has passed the stage of amateurism. In a new country, a man with a smattering of skill or knowledge may pass for a specialist. Alberta is no longer a new country. Competition and the struggle for life are already keen enough here to eliminate the parasite and the "bluffer". Henceforth trained skill and knowledge are indispensable to good living.

II. Education, because it is so widely available, is more and more a factor in success. "A good big horse is better than a good little horse"; of two equally bright and willing boys, the one with more education is intellectually bigger than the other, and is being preferred.

III. Goods and services are being sold on an increasingly competitive market, with the result that personal contact is often the deciding factor in the securing of business. Of two equally bright and willing boys, the one who can represent his firm with dignity and courtesy across the counter, in the office or on the customer's doorstep is at a definite advantage.

IV. Generally speaking, a boy or man does not jump into a better job, but GROWS into it. If he is working at "Job A" and "Job B" is the next one above him, he can perform his own work in such a way as to show insight into, and consideration for, the difficulties of the man at Job B; in which case he gets the reputation of being a good co-operator and an intelligent workman, and in the course of time finds that he has grown into Job B. Whether in professional or business or industrial life, the great adventures and the finer satisfactions are not for the man who waits for the chance to jump, but for the man who sees to it that he does not stop growing.

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